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DITIONING
GERATION NEWS
...r of the Industry
Vol. 77, No. 4, Serial No. 1,401 January 23, 1956
Issued every Monday at 450 West Fort St., Detroit 26, Michigan
Established 1926
Member, Associated Business Publications ABP ABC Member, Audit Bureau of Circulations
Reentered as second class matter October 3, 1936 at the post office at Detroit, Mich., under the Act of March 3, 1879.
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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Story of the Week
The Name's the Game
Story Behind the Story
What's In a Name?
Business Definitions
Utilities and Air Conditioning

Story of the Week

Hear about the hog-calling contest at a county fair where the winner ragged a loser?

"With that harsh voice of yours, what hogs could you persuade to come?" he obnoxioused.

"You're here, aren't you?" quieted the runner-up.

It's a pity more people can't travel the straight and narrow path without becoming straightlaced and narrow minded.—*American Farm Youth Magazine.*

The Name's the Game

Michigan has both a Hell and a Paradise among its towns. But did you know there's a Jollytown in Pennsylvania, Humansville in Missouri, Love in Oklahoma, and Friend in Nebraska?

In contrast to Jollytown, Pennsylvania also contains Puritan, Decorum, Sober, and Frugality. No kidding! All these are *bona fide* municipalities.

While pursuing this intriguing trail through a gazeteer we found Clever, Mo.; Talent, Ark.; Philanthropy, Ohio; Wisdom, Mont.; Dollarville, Mich.; Speculator, N. Y.; and Braball, Texas. (That last one seems peculiarly appropriate).

We'll never know why good burghers named their postal locations Dull, Ohio; Drap, Pa.; Worry, N. C.; Rat, Mo.; Frankenstein, Mo.; Difficult, Tenn.; Ordinary, Va.; or Dilly, Wis. Perhaps these inferiority-complex folk should follow the cue of Mauch Chunk, Pa., which recently changed its name to Jim Thorpe, Pa. That we can applaud.

We're not so inspired, though, about another name switch: Hot Springs, N. M., to Truth or Consequences, N. M.

Okay, Texas, seems O.K., as does Forward, Wis. Best of all we cherish Barefoot, Ky.

Story Behind the Story

"Pete" Peters, respected and well-liked advertising manager for Frigidaire Div. of General Motors Corp. for quite a few years, has entered the brick business as president and principal stockholder of the Sphar Brick Co. of Maysville, Ky.

(Concluded on Page 12, Col. 1)

Carrier Bows 325-Ton Hermetic Compressor for Central Systems

By C. Dale Mericle

SYRACUSE, N. Y.—Aiming at a predicted $10 billion market in the next 10 years for large, central type air conditioning systems, Carrier Corp. last week unveiled a new hermetic centrifugal compressor.

Available initially in 30 different capacities from 100 to 325 tons, the new machine is expected to reduce installation costs, according to Carrier officials.

The hermetic design eliminates on-the-job assembly of compressor, gears, and motor—probably the most important installation cost factor—and because of its light weight and virtually vibration-free operation, it requires no foundation and can therefore be installed on upper floors or the roof—another cost saving, Carrier says.

Two other products recently introduced by Carrier's Machinery & Systems Div. are also expected to cut installation costs for big systems—a "pushbutton" electronically controlled absorption machine in the 100 to 700-ton range, and new "Modular Weathermaster" high velocity Conduit units for both new and existing multi-story, multi-room buildings.

The greatest markets for large air conditioning will be in office buildings, factories, stores, apartment houses, hotels, and hospitals, with industrial plant systems expected eventually to lead all the rest, believes Charles

(Concluded on Page 37, Col. 1)

Amana Introduces Timed Room Unit In Year-Round Line

AMANA, Iowa—A room air conditioner equipped with an activated charcoal filter to trap odors and fumes, and with a timer that turns the unit on and off automatically at pre-set intervals, highlights the 1956 line introduced by Amana Refrigeration, Inc.

The 1956 models include:

1) The "Year 'Round" line of four models in the ½, ¾, 1, and 1½-hp. sizes for installation in standard and casement windows, featuring the timer that automatically turns the unit on or off at pre-set hours, even after skipping one or two days, activated charcoal filter, increased cooling power and heating ca-

(Concluded on Page 11, Col. 4)

A. O. Smith Debuts Vertical Cooling, Year-Round Model

KANKAKEE, Ill. — A brand new line of vertical cooling units in both air and water-cooled models is being introduced this month by the Permaglas Div. of the A. O. Smith Corp.

Also being introduced is a restyled and completely re-engineered year-round air conditioner. The cooling unit is relocated from its original horizontal position in the base to

(Concluded on Back Page, Col. 2)

Frozen Food Meeting To Discuss Cabinet Space Jan. 29-Feb. 2

WASHINGTON, D. C. Methods of obtaining adequate frozen food cabinet space at the retail level will be one of the topics discussed at the 1956 National Frozen Food Convention to be held Jan. 29-Feb. 2 in New York City.

The convention is being jointly sponsored by the National

(Concluded on Back Page, Col. 1)

Vote To Complete School Cooling Set In Phoenix

PHOENIX, Ariz.—Completion of air conditioning at two local high schools is being put up to the voters here on Feb. 9.

Voters in the Phoenix Union high school district will be asked to approve $200,000 in bonds to do the job in the new Camelback and South Mountain high schools. When constructed last year, these buildings were equipped with ducts and other facilities for air conditioning. Only the refrigeration equipment is missing.

If the voters approve this project by a substantial majority, it was reported, engineers will be hired to plan for cooling at the three other city high schools and for Phoenix college. After cost is estimated, then another bond issue will be submitted to the voters.

Local Group Buys Quicfrez Control

FOND DU LAC, Wis. — A group of unidentified local businessmen have purchased the controlling interest of Quicfrez, Inc. for more than $250,000, it was reported here recently.

No changes were immediately made in management or directorship, the report said. But an expansion in the company's merchandising program was planned.

Quicfrez, which was formerly known as Sanitary Refrigerator Co., recently received a $1 million order to manufacture refrigerators for distribution under the "Duncan Hines" label, the report said.

Room Unit Prices Expected To Be Firmer, NARDA Hears

By John O. Sweet

CHICAGO—There will be a far firmer price structure on room air conditioners this year, according to E. A. Tracey, general manager of Mitchell Mfg. Co.

Speaking at the annual convention of the National Appliance & Radio-TV Dealers Association, Tracey also predicted that almost all appliance dealers will be selling packaged residential air conditioning units within three to five years.

Another speaker, John W. Craig, Westinghouse vice president and general manager of its electric appliance divisions, in taking a look at the future of retail distribution, said:

"We at Westinghouse are looking for 'automobile-type' dealers to emerge because we believe that this type of operation will survive and prosper. And—like all good deals—we, as a manufacturer, can survive and prosper only if we have dealers who can move goods in volume at a profit to themselves."

Duncan Menzies, president of Servel, Inc., revealed that Servel late this year will unveil a gas refrigerator, with automatic ice-server, that will enable the user,

(Concluded on Page 37, Col. 3)

Home Building Aided by 30-Yr. Housing Credit

WASHINGTON, D. C.—Better chances for high levels of home building to continue are seen in the decision made last week to permit thirty-year terms for home purchasers whose mortgages are guaranteed by the Veterans Administration or insured by the Federal Housing Administration.

This represents a relaxation from the 25-year limit announced last July. However, a 2% down payment is still required on VA-guaranteed loans. F.H.A. continues to require a 7% down payment on the first $9,000 of appraised value and 27% on the value above that figure.

The move was made, the two agencies said, to support continued high level of home building in 1956 without risking serious inflationary dangers.

Humidity Sensing Element Developed

PHILADELPHIA — An electrical humidity sensing element operating on a completely new principle has been announced by El-Tronics, Inc. here.

The company claims that the element will make possible a wide range of rugged and accurate relative humidity gauges and control devices. It looks forward to its use as a control to automatically measure temperature and humidity in air condi-

(Concluded on Back Page, Col. 1)

Frozen Food Trade Practice Rules Effective Feb. 13

WASHINGTON, D. C.—A set of trade practice rules for the frozen food industry were promulgated by the Federal Trade Commission on Jan. 13. The rules become effective 30 days after that date.

They are divided into two groups. Group 1 rules are restatements of practices prohibited by Federal laws so as to give them application to this particular industry. Group 2 rules are considered to be sound business practices but do not have the force of law. There are 18 Group 1 rules and two Group 2 laws.

Fifth section in the first rule under Group 1 prohibits discriminatory services or facili-

(Concluded on Page 4, Col. 1)

DON'T MISS

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WHEN **QUALITY** COUNTS...

Count on

READING

COPPER TUBING

FOR REFRIGERATION & AIR CONDITIONING EQUIPMENT

READING COPPER TUBE

READING TUBE CORPORATION

EMPIRE STATE BUILDING NEW YORK 1, N. Y.

WORKS: READING, PA.

Quartermaster Studying Cold Storage of Rations

WASHINGTON, D. C.—Cold storage of Army rations is a primary subject of Quartermaster Corps study.

To assist in the look at the problem, recently the Quartermaster General established a 6-man Quartermaster Corps Industry Advisory Committee on the Cold Storage of Rations.

The committee will advise the Quartermaster Food and Container Institute on such matters as temperatures and relative humidities, packaging, and so on, as they relate to storage and handling of Army rations.

On the committee are V. O. Appel and A. R. Current, Chicago; H. C. Diehl, Colorado Springs, Colo.; Harlan J. Nissen, Los Angeles; V. C. Stevens, Dallas; and Garth A. Shoemaker, Elmira, N. Y.

C. B. Collins, RTA General Counsel, Dies

WASHINGTON, D. C.—C. B. Collins, general counsel for the Refrigeration Trade Association of America, died Jan. 17 at Providence hospital here. He was 35.

Active for several years in the affairs of the refrigeration industry, he was one of the founders of RTA. He also represented other refrigeration interests in the nation's capital.

S & R Soda Fountain To Move

NEW YORK CITY—S. & R. Soda Fountain Mfg. Co. will soon move to larger quarters at 550 Trinity Ave. here, Bernard Roberts announced recently.

More space is needed since S. & R. added complete food service equipment to its soda fountain line, Roberts said.

Refrigeration Board Of North Carolina Holds First Meeting

RALEIGH, N. C.—The new State Board of Refrigeration Examiners met here recently, took the oath of office and elected officers, and promptly began a search for an executive secretary.

Prof. Karl Hanson, head of the Mechanical Engineering Dept. at State college, was elected chairman of the board; C. V. Stevens of Salisbury, manufacturers' representative, was elected secretary. Walter H. Jones of Raleigh, a contractor, was elected treasurer.

Other members of the board, which was established by the 1955 General Assembly to examine and license refrigeration contractors, are P. B. Mayo of Asheville, a wholesaler; George Brickle of Wilmington, a contractor; and Prof. Emil Chanlett of the Department of Sanitary Engineering of the University of North Carolina, Chapel Hill.

Calif. Plumbing Proposal Omits Air Conditioning, Refrigeration Systems

LOS ANGELES—Work normally done by the refrigeration fitter will not be covered by a proposal to license journeymen plumbers on a state-wide basis, Henry B. Ely, executive secretary of the Refrigeration & Air Conditioning Contractors Association of Southern California, Inc., reported recently.

Dan McDonald, head of the California Plumbers' Council, agreed to exempt refrigeration and air conditioning systems from the bill's definition of plumbing, Ely said.

The definition had included all or any part of drainage systems as well as water lines.

NFFLI Purchases 11-State Monthly 'Western Locker'

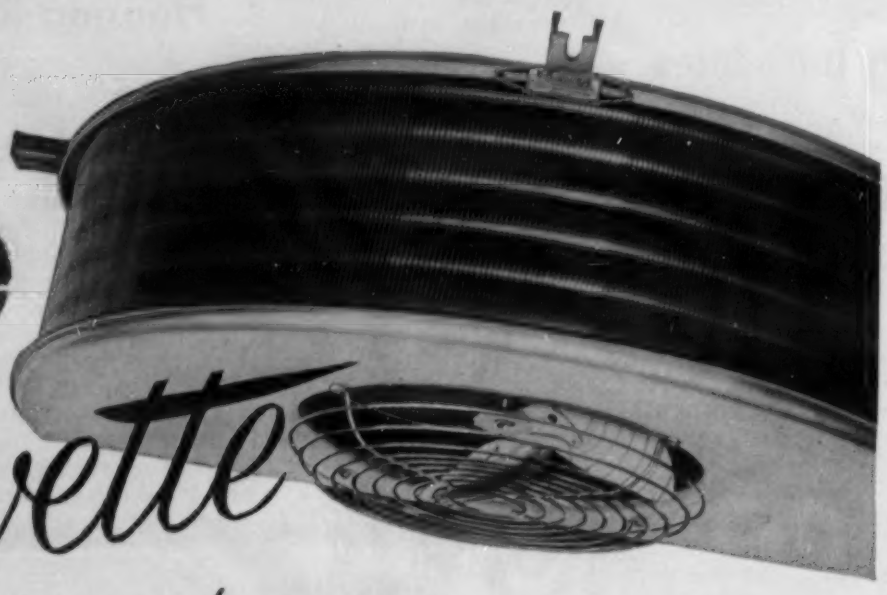
ELIZABETHTOWN, Pa. — *Western Locker* magazine, a monthly publication devoted to locker plant operators, frozen food centers, and freezer food suppliers in 11 western coastal and mountain states, was recently sold by its publisher, John L. Lansinger, to the National Frozen Food Locker Institute.

Robert L. Madeira, executive secretary of NFFLI, announced that the institute will maintain the present editorial offices at 1154 S.E. 53rd Ave., Portland 15, Ore., while publication offices for *Western Locker* will be located at 113 N. Market St., Elizabethtown, Pa.

The publication will be edited by Mrs. Virginia Corning, presently managing editor. John Schwartz, who recently joined the institute staff, has been appointed managing editor.

Madeira stated further that *Western Locker* will continue as a western regional publication for an indefinite period and later be expanded to a national magazine for the industry.

Large *Curvette* by KRAMER



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***quick* and *easy* access**

Praised for years by installation and service men.

Built-in Heat Exchanger

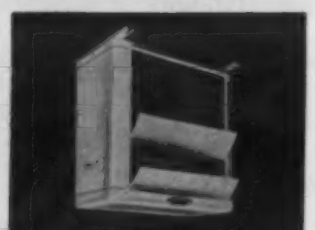
NO RUSTING — polished aluminum casing

WRITE NOW FOR BULLETIN C-192-7

SMALL CURVETTE
800 to 5,600 BTU's Per Hour

COOLMASTER
2,500 to 60,000 BTU's Per Hour

RADIAL
2,500 to 23,000 BTU's Per Hour

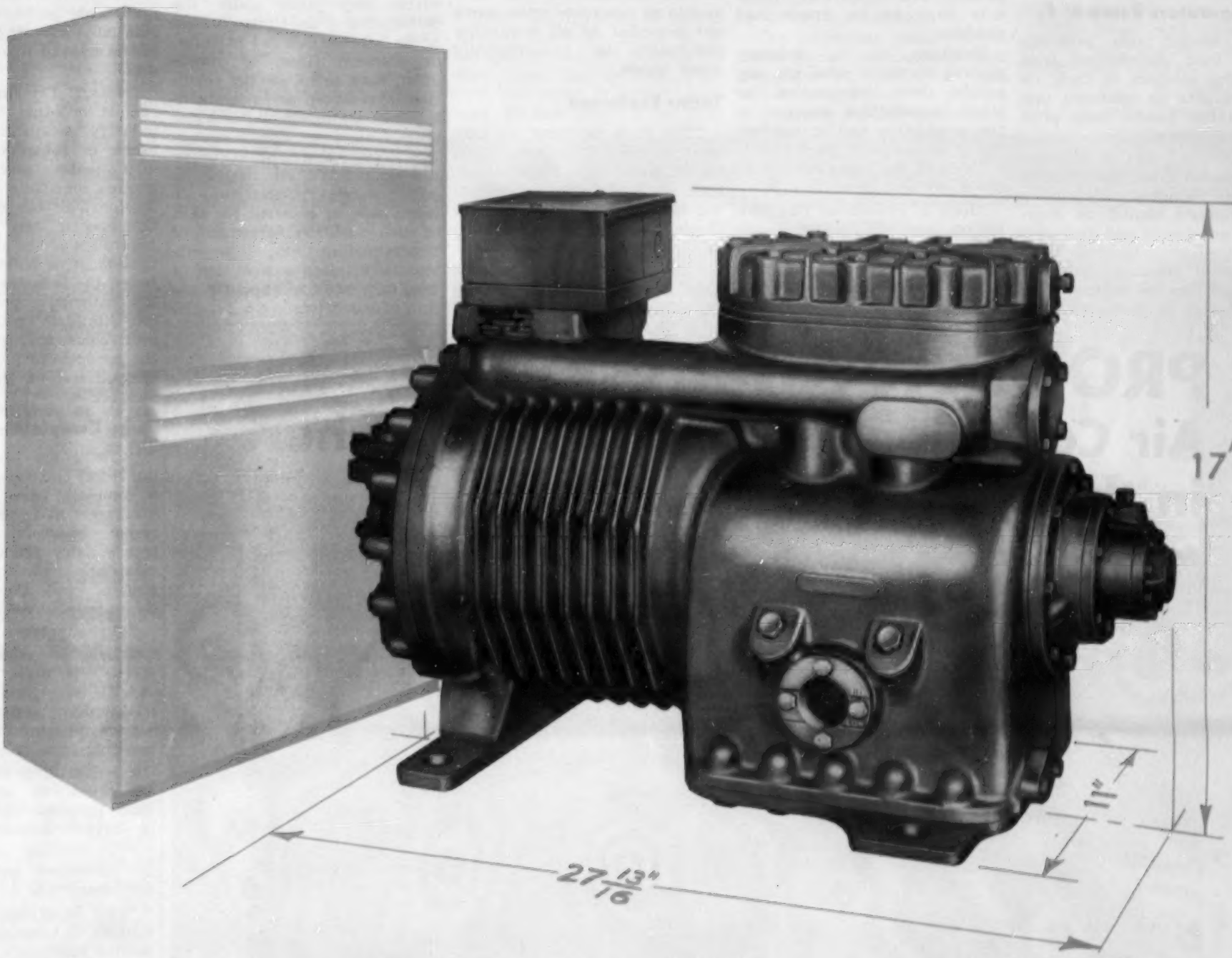


KAY-TEE
2,500 to 12,000 BTU's Per Hour

KRAMER TRENTON CO. • Trenton 5, N.J.

For more information about products advertised on this page use Information Center, page 26.

NEW... *Quiet, efficient, power-packed*



10 H.P. *Copelametic*

FOR... PACKAGED AIR CONDITIONING

There was plenty of interest in this 10 H.P. Copelametic when we introduced it at the ARI Show in Atlantic City. Many features make it ideal for quality, packaged air conditioning.

The 10 H.P. Copelametic motor-compressor fits neatly into a compactly designed unit. For greater capacity, two motor-compressors can be installed for flexibility in operation.

Use of suction cooling and Freon-22 give the 10 H.P. Copelametic high capacities with low power input. As in all time-proved Copelametics, belts, seals and manual oiling are eliminated. Being accessible, adjustments and parts replacement can be made on the spot with minimum loss of operating time.

Everything required in package air conditioning is featured in the 10 H.P. Copelametic. It is compact . . . rugged . . . efficient . . . quiet-running . . . accessible. It has the protection of positive lubrication.

A comprehensive, detailed engineering packet describing the 10 H.P. is available. SEND FOR YOURS.

SINCE 1918

Copeland REFRIGERATION CORPORATION, Sidney, Ohio

For more information about products advertised on this page use Information Center, page 26.

Frozen Food Trade Practice Rules--

(Concluded from Page 1, Col. 5)

ties. An example would be a frozen food distributor furnishing a display or storage cabinet to one retailer and not offering it to all other retailers on "proportionately equal" terms.

Maintain Constant Temperature Below 0° F.

The second rule prohibits frozen food distributors from providing cabinets to their retail accounts on condition that the retailer handle their products exclusively.

The second rule in Group 2 recommends that "the temperature and refrigeration of industry products should be maintained constantly and uniformly not higher than 0° F. in order to prevent spoilage, deterioration, and contamination."

Industry products are defined to include vegetables, fruits, juices, fish and shellfish, baked goods, and other miscellaneous prepared foods which are packed, marketed, and delivered to the ultimate consumer in a frozen state.

Not included are meats and poultry, and frozen dairy products such as ice cream and sherbets.

Members of the industry covered by these rules are any person, firm, corporation, or other organization engaged in the production and/or marketing of products of the industry.

Texts of the three rules cited above are as follows:

"Rule 1. Prohibited Discrimination. . . .

"Section V. Prohibited Discriminatory Services or Facilities. It is an unfair trade practice for any member of the industry engaged in commerce to discriminate in favor of one purchaser against another purchaser or purchasers of a commodity bought for resale, with or without processing, by contracting to furnish or furnishing, or by contributing to the furnishing of, any services or facilities connected with the processing, handling, sale, or offering for sale of such commodity so purchased upon terms not accorded to all competing purchasers on proportionally equal terms.

Terms Explained

"The term 'services' as here used, includes, but is not limited to, the installation, maintenance, and repair of cabinets designed for use by retail stores in the display, preservation, and storage of frozen food products.

"The term 'facilities,' as here used, includes, but is not limited to, cabinets designed for use by retail grocery stores in displaying, preserving, and storing frozen food products. . . .

"Rule 2. Exclusive Deals.

"It is an unfair trade practice for any member of the industry engaged in commerce, in the course of such commerce, to lease or make a sale or contract for sale of any industry product, for use, consumption, or resale within any place under the jurisdiction of the United States, or fix a price charged therefor, or discount from, or rebate upon, such price, on the condition, agreement, or understanding that the lessee or purchaser thereof shall not use or deal in the goods of a competitor or competitors of the lessor or seller, where the effect of such lease, sale, or contract for sale, of such condition, agreement, or understanding, may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

"Note 1. The following is an example of a practice violation of this rule:

"Manufacturer A supplies retail grocery store B with a cabinet for the display, preservation, or storage of frozen food products sold by B under an agreement or understanding with B that B will deal only in products purchased from A and the effect of such arrangement has a reasonable probability of substantially lessening competition in the sales of frozen food products.

"Note 2. The furnishing of a cabinet or other benefit by an industry member to his customer or prospective customer may under certain circumstances constitute a violation of Section 5 of the Federal Trade Commission Act, as amended, regardless of the absence of any agreement or understanding between the industry member and his customer or prospective customer that the customer or prospective customer will not deal in the products of a competitor or competitors of said industry member.

Dairy Complaints Pending

"(There are presently pending before the commission several complaint cases against manufacturers and processors of ice cream, sherbets, and similar frozen dairy products charging violation of Section 5 of the Federal Trade Commission Act, as amended, by—

"(1) supplying cabinets to customers for display, storage, and preservation of products;

"(2) supplying to customers installation and maintenance services relating to the facilities mentioned;

"(3) making cash or credit allowances to customers for their purchase of the facilities or services mentioned;

"(4) making loans of money to customers and prospective customers; and

"(5) supplying of other benefits to customers and prospective customers,

"Under circumstances having the effect or reasonable probability of substantially injuring, suppressing, or stifling competition or tending to create a monopoly in the sale in commerce of the products mentioned.

Complaint Decisions May Clarify Section 5

"Decisions made in the mentioned pending complaint cases may supply substantial clarification as to the applicability of said Section 5 to these practices, and in that event consideration will be given to the inclusion of provisions supplying such clarification.

"Rule B." Proper Refrigeration.

"The industry condemns practices at variance with essential health and sanitary temperature and refrigeration control requirements as constituting a menace to the public health and the general welfare of the consuming public and the industry.

"It recommends that the temperature and refrigeration of industry products should be maintained constantly and uniformly not higher than 0° F. in order to prevent spoilage, deterioration, and contamination.

PROOF AGAIN! G-E Packaged Air Conditioner dealers climb higher in the business than anybody!

NOW G-E CEILING-MOUNTED UNITS OPEN NEW MARKETS FOR BIGGEST PROFITS EVER

Matter of fact, G-E Packaged Air Conditioner dealers are climbing right up to the ceiling! Because new G-E units go up to the ceiling, too. They don't take a single foot of valuable floor space! They open new markets for the biggest profits ever—offices, factories, super markets, small shops and restaurants—banks, institutions and warehouses!

Air-cooled and water-cooled models. Where water is a serious problem, G-E air-cooled units, in 3 and 5 ton sizes, are an ideal answer... use no water, require only air and electricity. G-E water-cooled units are available in 3, 5 and 7½ ton sizes. All units may be equipped with heating coils for winter heating.

All-in-one construction. These models are entirely self-contained. No remotely located parts to cut efficiency or cause refrigerant leaks. Motor, compressor and condenser are sealed by flame to keep dirt and moisture *out*, vital refrigerant and oil *in*. And each cooling system carries G.E.'s famous 5-year warranty, which includes a generous labor allowance and shipping costs.

For full information about the extra advantages of G-E Packaged Air Conditioners, call your nearest G-E distributor, or write: C. J. Rigby, General Electric Company, Commercial and Industrial Air Conditioning Dept., 5 Lawrence Street, Bloomfield, New Jersey.

Packaged AIR CONDITIONERS

Progress Is Our Most Important Product

GENERAL ELECTRIC

For more information about products advertised on this page use Information Center, page 26.

LaCrosse Enters Beverage Vending Machine Field

LA CROSSE, Wis.—The La Crosse Cooler Co. has recently announced its entry into the coin-operated vending machine field.

The firm, which has been in the commercial refrigeration business for nearly 25 years, first showed its new vending machines at the convention of the American Bottlers of Carbonated Beverages in Miami in November. (See page 20, Dec. 5 issue.)

R. S. Denzer, La Crosse president, said the machines had been in the development stage for several months and there are already a considerable number in the field.

A special engineering section for the testing and further development of this line has been set up, Denzer said.

Larry M. Harris has been named field sales supervisor and is currently building up an extensive sales force to work closely with the bottling industry. Already La Crosse is well represented throughout the south and southwestern states, Denzer said.

3 Papers Dealing with Refrigeration Problems Due at Truck Meeting

WASHINGTON, D. C.—Three papers on refrigeration problems will be presented during the 15th annual convention of the Truck-Trailer Manufacturers Association, to be held Jan. 21-25 at the Edgewater Gulf hotel, Edgewater Park, Miss.

L. H. Magor, chairman, TTMA Refrigeration Committee, and president, Aluminum Body Corp., Montebello, Calif., will preside over TTMA's annual refrigeration roundtable on Monday afternoon, Jan. 23.

Papers on trailer refrigeration problems will be presented by: M. B. Green, vice president, U. S. Thermo Control Co., Minneapolis; J. F. Stephens, vice president, Gustin-Bacon Mfg. Co., Kansas City; and Harold D. Johnson, transportation specialist, U. S. Department of Agriculture, Washington.

Food Chains Plan Management Clinic Jan. 30 to 31

WASHINGTON, D. C. — The first management clinic of the National Association of Food Chains will be held Jan. 30-31 at the Sheraton-Cadillac hotel in Detroit, the group has announced.

Formulas which have been used successfully as guides in determining store size, amount of space to be allocated to various commodity groupings, and space required for receiving, processing, and service areas will be discussed. One of the subjects to be covered is ways of reducing store obsolescence.

Among specific topics scheduled for discussion are: Approaches to store layout analysis; elements of store layout; store layout as affected by special service and storage problems; store facilities and equipment—grocery, produce, dairy; meat department facilities and equipment; and store interior, general facilities — equipment maintenance.

Air-Con, Inc. Chartered

ditioning and heating units. Fred A. Beaty has been named resident agent. $250,000 capitalization was authorized.

TOPEKA, Kan. — Air-Con, Inc., Wichita, has been granted a charter as dealers in air con-

RACCA Votes To Take In 4 Chapters

CLEVELAND — Four new local chapters were voted into the Refrigeration and Air Condiitioning Contractors Association at the association's convention in Atlantic City, Ray Kromer, executive vice president announced recently.

They are RACCA of Sabine Area at Beaumont, Texas, W. A. Goodell, president; RACCA of New York, Inc. at New York City, Ted Reina, president; Midland Empire RACCA at Spokane, Wash., E. S. Matthews, president; and RACCA of Michigan at Lansing, Mich., R. B. Garlock, president.

Carnes Completes Addition

VERONA, Wis. — Carnes Corp., manufacturer of ceiling diffusers and power roof ventilators, has recently completed the addition of 60,000 sq. ft. of floor space to its plant here.

The additional space will include both warehousing and manufacturing facilities and will materially increase production volume and delivery service.

Mission Appliance Names C. A. Miller To New Post As Market Expands

LOS ANGELES—C. A. "Joe" Miller has been appointed sales manager, heating and air conditioning, Mission Appliance Corp., according to Frank R. Osborne, vice president and general manager.

"We have had continued growth and expansion in these fields," said Osborne.

"This made the creation of this new post necessary."

1906
Engineering marvel at the turn of the century "hi-fi" in the making.
It was in 1906 that the first Brunner-engineered product appeared.
TODAY... Brunner experience
pays off in more sales for you...
provides the most complete line of
Air Conditioning Condensing Units
available from a single source!
PROVEN QUALITY
50th Anniversary
BRUNNER
DEPENDABLE
BRUNNER MANUFACTURING COMPANY, UTICA, N. Y.
THE BRUNNER CO., GAINESVILLE, GA.
IN CANADA: BRUNNER CORP. (CANADA) LTD., TORONTO, ONTARIO
There's a right Brunner Condensing Unit for every remote Air Conditioning application . . . ranging from ¼ H.P. through 100 H.P.
ALSO AVAILABLE
Newly designed BAC packaged units in 3, 5, 7½ and 10 H.P., finished in Hammertone Green.

1956 is the year to do

THE BIG LINE . . . OFFERING YOU

Here's the application

Here's the range

1/12 to 1/5 H. P.

1/8 to 3/4 H. P.

Here are typical Tecumseh compressors and condensing units

Models P1218, P91, P6112, P5312
1/12-1/8-1/6-1/5 H.P.
Hermetic Compressors

Models S88, S64, S5414, S4414, S4416
1/8-1/6-1/5-1/4 H.P.
Hermetic Compressors

Model S4814
1/4 H.P. Hermetic
Compressor

Model S4814LP
1/4 H.P. Baseless Highside

for 1956 Tecumseh offers

MORE QUALITY because as a responsible leader in the refrigeration industry, Tecumseh is constantly improving quality controls to assure more efficient compressor performance. The rigid requirements set by Tecumseh far surpass minimum standards for all phases of compressor manufacturing.

MORE VOLUME because Tecumseh now has three modern, high production manufacturing plants to meet large volume compressor requirements. These plants are strategically located in Tecumseh, Michigan, Marion, Ohio, and Danville, Illinois.

MORE PRICE ECONOMY because of flexible design, tremendous volume and unmatched production methods. Tecumseh is able to make and continually pass along many real savings to our customers.

For more information about products advertised on this page use Information Center, page 26.

business with Tecumseh

. . . world's largest producer of refrigeration and air conditioning compressors and condensing units

THE WIDEST CHOICE

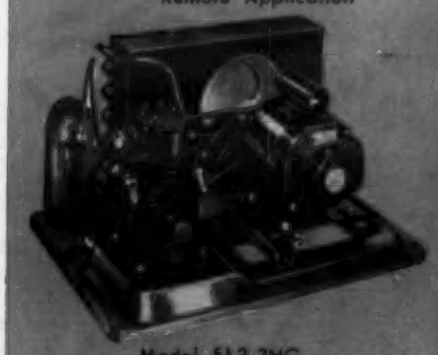
¼ to 15 H. P.
Conventional
⅛ to 5 H. P.
Hermetic

⅓ to 2 H. P.

¼ to 15 H. P.
Conventional
⅛ to 5 H. P.
Hermetic

1 to 5 H. P.

Model W300L
3 H.P. Water Cooled
Conventional
Condensing Unit
Remote Application



Model F12-2HG
½ H.P. Air Cooled
Conventional Condensing Unit
Self-Contained

Model S7R16
¼ H.P. Hermetic Compressor

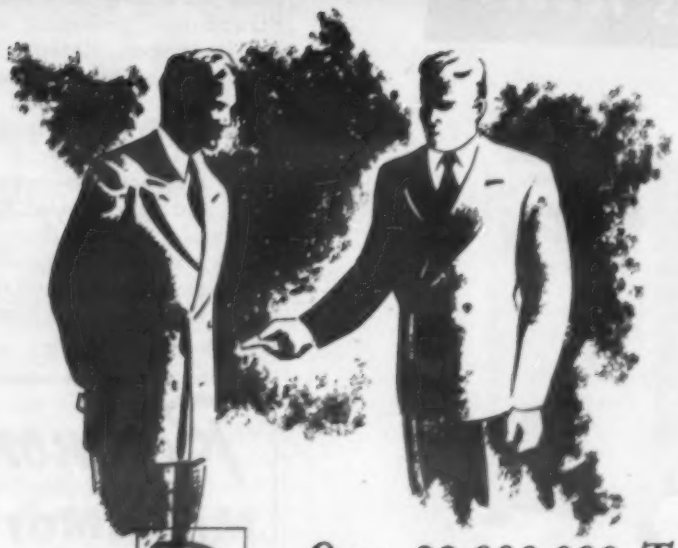
Model S74T16
Economy 2 H.P. Hermetic Compressor

Model HH
Conventional Compressor
Automotive Air Conditioning

Model S68HF
¼ H.P. Hermetic Condensing Unit

Model JE300
3 H.P. Hermetic Compressor
Single Phase

Model FB500
5 H.P. Hermetic Compressor
Single Phase



We extend our thanks to the many interested persons who visited the Tecumseh exhibit at the recent Air Conditioning and Refrigeration Exposition.

The models you saw on display and those featured here are typical of the varied applications and wide range covered by Tecumseh in the Air Conditioning and Refrigeration industries.

We suggest you investigate the many other advantages offered by Tecumseh—and make 1956 your year to do business with Tecumseh.

Over 22,000,000 Tecumseh Compressors in Use Today

TECUMSEH PRODUCTS CO.

Tecumseh, Michigan
Marion, Ohio
Danville, Illinois

EXPORT DEPT. - P.O. Box 2280, 24530 Michigan Ave., W. Dearborn, Michigan

For more information about products advertised on this page use Information Center, page 26.

Wholesaler Refrigeration, Air Conditioning Sales In November Up 13% over Same '54 Mo.

WASHINGTON, D. C.—Sales of air conditioning and commercial refrigeration equipment distributors in November rose 13% above the year-ago level and were unchanged from October, according to the Bureau of the Census.

Their sales for the first 11 months of 1955 were 13% ahead of the corresponding period of 1954.

End-of-November inventories of the distributors declined 10% compared with a year ago and were down 2% from last Oct. 31.

The Census Bureau also reported that November sales of distributors of electrical appliances, TV and radio sets and parts, and electronic equipment and parts gained 17% compared with November, 1954, and were up 11% from October. Their sales for the first 11 months of 1955 also increased 11% compared with the like year-ago period.

These distributors' inventories at the end of November were 12% higher than on Nov. 30, 1954, and the same as at the end of October.

November sales of all types of merchant wholesalers as a group rose 2% above October and were 13% above November a year ago. Sales for the first 11 months in 1955 were 11% higher than in the 1954 period. Nov. 30 inventories rose 1% above Oct. 31 stocks and were 6% above the year-ago inventory level, the Census Bureau report concluded.

LEFT: Live plants growing atop salad and dessert display case are practically the trade-mark of White Spot restaurants in Denver. RIGHT: Custom-built stainless steel reach-in refrigerators, featuring adjustable shelves within their 9-cu. ft. storage space are used in the kitchens of newest White Spot restaurants.

Planter Box Display Case, Custom Units Highlight Restaurant Job

DENVER—Live plants growing out of the top of a refrigerated display case have practically become a trade-mark of the White Spot restaurants here.

W. F. Clements, who operates five fast-service restaurants, designed the unusual case himself and has taken steps to patent the design.

The fixture is a salad and dessert display case with a planter box on top. The entire unit is stainless steel. Glass sliding doors on both sides of the 5-ft. case give a "pass-through" effect.

A circulating blower operating at 450 c.f.m. keeps cool air moving in the interior of the case to prevent migration of flavors and to retain appearance in the pies, salads, and special desserts while they are on display.

For his newest restaurant, a $100,000 combination drive-in and table service establishment, Clements also had two custom built, stainless steel reach-ins made for his chefs. The 9-cu. ft. units feature adjustable shelves, it is pointed out.

Stainless Steel Equipment Co., Denver refrigeration contractor, worked with Clements in providing the custom equipment. This company also furnished the low temperature storage cabinets along the fast service rail and an 8 by 6-ft. walk-in refrigerator in the basement.

All equipment is served by Copelametic compressors lined up along a basement wall. A stand-by unit can be quickly substituted in the event of trouble.

Hardware, Components Mfr. To Construct New Plant In Rockford, Ill.

ROCKFORD, Ill.—A modern one-story $5,000,000 screw and bolt plant will be built on a 70-acre site on the outskirts of Rockford by National Lock Co., hardware manufacturer.

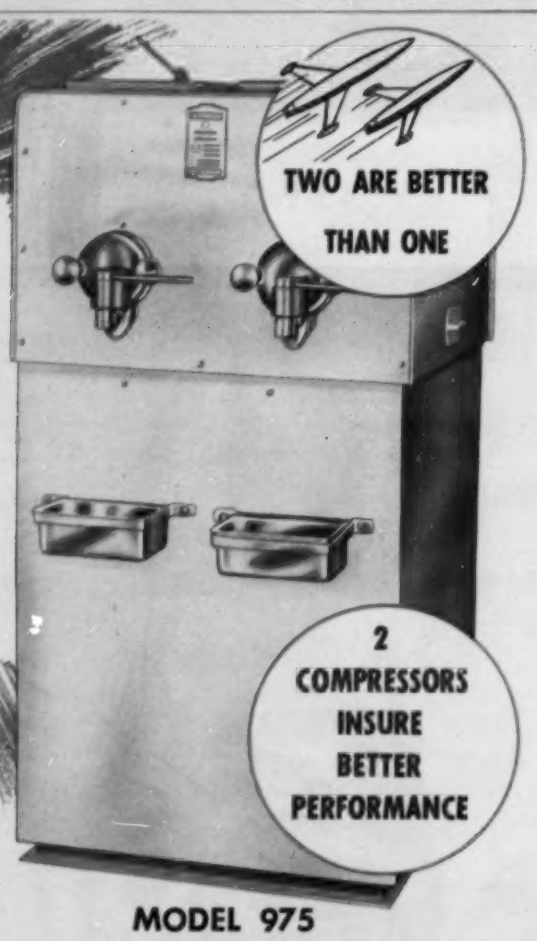
Construction will start in early spring with completion scheduled for the fall of 1957.

"Having virtually exhausted the possibilities of expansion on the present plant site situated near the center of the city, the company finds it necessary to move a large part of its operations to a new location," A. J. Strandquist, president and general manager, stated. The new plant will contain approximately 600,000 sq. ft. and will increase the company's total factory floor area to 1,600,000 sq. ft.

In addition to screws and bolts and other metal fasteners, National Lock manufactures hardware and component parts for automobiles, electrical and other household appliances, furniture, and aircraft.

for '56
FREEZ-KING ANNOUNCES
the greatest development in modern continuous freezers!

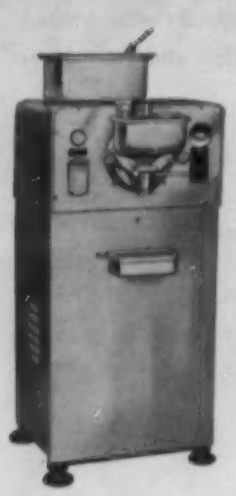
the new FREEZ-KING—easiest to operate and most sanitary twin freezer in the world. Two complete freezers in one stand—each unit operates independently—every portion perfect—exclusive, new FREEZ-KING automatic feet!



MODEL 975
SELF CONTAINED
Spigot type draw-off produces neat, uniform products. All stainless steel. Large output capacity.

ORDER YOUR FLOOR SAMPLES TODAY!

A MODEL FOR EVERY PURPOSE

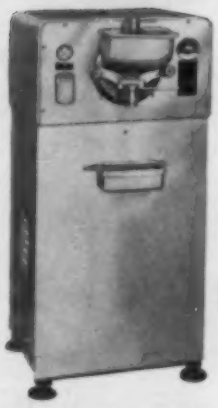


MODEL 160
SHAKE DISPENSER
serves
200 SHAKES
AN HOUR

- Easy! As simple as serving a soft drink.
- Produces shakes and malts at low cost—high speed—big profits.
- Sanitary! Direct from dispenser to customer. No handling. No contamination.

MODEL 150
serves
SOFT ICE CREAM
or FROZEN
CUSTARD

- Uses less power—costs less to operate.
- Requires only four square feet of floor space.
- Easy to clean! Takes only 5 to 10 minutes instead of the usual ¾ to 1½ hours.



2 LOW PRICED MODELS FOR

Lunchrooms, Drive-ins, Supermarts, Theaters, Burger Stands, Drug Stores, Bus Stations, Skating Rinks, Amusement Centers, Military Canteens, Grocery Stores, Industrial Cafeterias
. . . and many others

EXCLUSIVE TERRITORIES AVAILABLE FOR MASTER DISTRIBUTORS & DEALERS

WRITE FOR DETAILS

THE FREEZ-KING CORPORATION
2518 WEST MONTROSE AVE., DEPT. 40, CHICAGO 18, ILL.

Redmond
MICROMOTORS
One of largest stocks in the world!
FACTORY DISTRIBUTORS
MARVIN L. "FERGIE" FERGESTAD
CYCLO-FREEZE CORP.
6318 Cambridge, Mpls. 16, Minn.
West 9-6794

For more information about products advertised on this page use Information Center, page 26.

Welding Eliminates Leak Hazards In Largest Cooled Bldg.

NEW YORK CITY—The 45-story building now being erected in mid-Manhattan for Socony-Mobil will be the world's largest fully air conditioned office building.

Air conditioning contractor on the job is Kerby Saunders, Inc.

This will also be the world's largest metal-clad structure, it has been announced.

An innovation in the elaborate piping system that will distribute chilled water for air conditioning is that welding has replaced mechanical joints. It is claimed that welding eliminates the hazards of leaks due to expansion and contraction of the piping, and that welding permitted the job to be done quicker and at less cost.

Using portable oxy-acetylene welding and cutting equipment, four teams of two men each handled the welding job.

The new building is scheduled for completion early in 1956.

ASRE Publishes 9th Data Book

NEW YORK CITY — Ninth edition of the Air Conditioning-Refrigerating Data Book, a "design" volume, has been published by the American Society of Refrigerating Engineers.

Chapter on air distribution has been completely rewritten, as has the first part of the chapter on controls to give a much fuller coverage of expansion valves and other refrigeration control devices.

Substantial revisions were also made in other chapters under the direction of Prof. Milo M. Bolstad, editor-in-chief.

This volume of the Data Book details the fundamental data and basic engineering information concerned with the theory and principles of the design of air conditioning and refrigeration equipment and systems. It includes sections covering theory, physical data, application design, basic equipment, auxiliairies and self-contained units, operation, etc.

The book contains 39 chapters, 980 pages (6½ x 9 in), 400 illustrations, and 240 tables.

Airtemp Plans NAHB Exhibit Jan. 22-26

DAYTON — Airtemp Div., Chrysler Corp., will sponsor a large display of home air conditioning and heating products at the National Association of Home Builders Exposition to be held in Chicago Jan. 22-26 at the Conrad Hilton hotel.

The company's exhibit will include both waterless and water-cooled "Spacesaver" year-round air conditioning systems; several models of gas and oil-fired furnaces, and a display of Airtemp's 1956 "Forward Look" room air conditioners.

A featured product will be the Airtemp Imperial "All-In-Wall" room air conditioner which is said to have generated substantial builder interest since its recent introduction.

Los Angeles RACCA, Union To Parley

LOS ANGELES—The Refrigeration & Air Conditioning Contractors Association of Southern California, Inc. will begin negotiations with the Los Angeles refrigeration fitters' local union to revise the current labor agreement between the two, Henry B. Ely, executive secretary of the contractors' association, reported recently.

The fitters requested the opening to discuss wage rates, transportation expense and subsistence, and travel time, Ely said.

Under the labor agreement, he asserted, there is a single wage rate for both servicemen and construction employes. However, the construction employes receive daily extra pay for reporting on the job site, which equalizes their pay with other construction trades.

Rates for other construction trades for the year beginning next July 1 range from $3 to $3.60 per hour plus welfare and other benefits, he noted.

Spinney Named To Post

GLENDALE, Calif. — Byron B. Spinney has been named regional representative for the General Controls Co. New York regional office with headquarters in Long Island City, according to J. F. Ray, vice president in charge of sales.

ARW Region 7 Meets Feb. 3 In Des Moines

E. ST. LOUIS, Ill.—Members of Region 7 of the Air Conditioning and Refrigeration Wholesalers will meet on Feb. 3 in the Savory hotel, Des Moines, Iowa, J. W. Cavataio, secretary, announced recently.

A closed meeting is planned for the morning and an open meeting for the afternoon.

30% Rise In Sales Has Worthington Adding Salesman

HARRISON, N. J.—"The air conditioning business will be very favorable in 1956 and the central year-round residential air conditioning market will come into its own," predicted Matthew M. Lawler, vice president and general manager of Worthington Corp.'s air conditioning and refrigeration division in a recent year-end statement. Lawler declared that 1955 sales were up 30% and his division expects a 20% increase in volume this year over 1955 sales.

"To meet the expected increase," he said, "the Worthington Corp. has embarked on a sales recruiting and training program to double the direct sales force in the field last year. At the same time, the engineering staff has been expanded to keep pace with the increased volume of business and 'to keep on top of' the swifter pace of product development which faces our industry now and in the immediate future."

Reviewing 1955, Lawler stated that all product lines contributed to the Air Conditioning and Refrigeration Div.'s increased sales volume. "Improvements in distribution resulted in 18% more shipments of commercial packaged units; sales of residential equipment were 54% higher; sales of central station equipment leaped up 30%."

Contributing factors to the bright outlook for air conditioning, pointed out Lawler, include:

1. All-time high employment.
2. Increased earnings of industrial workers without a corresponding increase in the cost of living.
3. Estimated all-time high corporate earnings.
4. Continued high rate of new home construction.
5. Increasing installation of air conditioning in remodeling of existing homes.
6. Continued movement of population from cities to suburban areas.
7. Mounting volume of industrial building and continuation of the current volume of commercial building.
8. Expected expansion in government building and stepped-up air conditioning of existing government buildings. "On this point," said Lawler, "we believe there will be active legislative pressure in the next session of Congress to establish and air conditioning program for these structures by General Services Administration."

Coleman Expands

WICHITA, Kan.—Ground has been broken for a $400,000 warehouse and office building in Los Angeles for the Coleman Co., Inc., manufacturer of heating and air conditioning equipment and outing products.

The new building will permit expansion of Coleman's Los Angeles sales branch. It will have 34,500 sq. ft. of floor area, including 3,500 sq. ft. of air conditioned office space.

WHAT . . WHEN . . WHERE — *A Guide to Coming Events of Interest*

National Association of Home Builders (NAHB)
Convention and Exposition
Jan. 22-26, Conrad Hilton, Sherman, Coliseum, Chicago

62nd Annual Meeting of ASHAE
Jan. 23-25, Sheraton-Gibson, Cincinnati.

Plant Maintenance and Engineering Show
Jan. 23-26, Convention Hall, Philadelphia.

National Frozen Food Convention (NAFFP)
Jan. 29-Feb. 2, Waldorf Astoria, New York City.

American Institute of Electrical Engineers (AIEE)
Winter Meeting
Jan. 30-Feb. 3, Hotel Statler, New York City

The 2nd Canadian Refrigeration & Air Conditioning (CMA) Show
Feb. 1-3, Coliseum, Toronto, Ont., Can.

Region 7 Air-Conditioning & Refrigeration Wholesalers (ARW) Meeting
Feb. 3, Savory hotel, Des Moines, Iowa

National Electrical Manufacturers Association (NEMA)
Meeting
March 12-16, Edgewater Beach hotel, Chicago

Gas Appliance Manufacturers Association (GAMA)
Annual Meeting
April 19-21, The Greenbrier, White Sulphur Springs

Air-Conditioning & Refrigeration Institute (ARI)
Annual Meeting
May 7-9, The Homestead, Hot Springs Va.

National Restaurant Association (NRA)
Convention and Exposition
May 7-11, Navy Pier, Chicago

Mechanical Contractors Association of America (MCAA)
Annual Meeting
May 15-18, Kentucky hotel, Louisville, Ky.

American Society of Refrigerating Engineers (ASRE)
Summer Meeting
June 3-6, Cincinnati

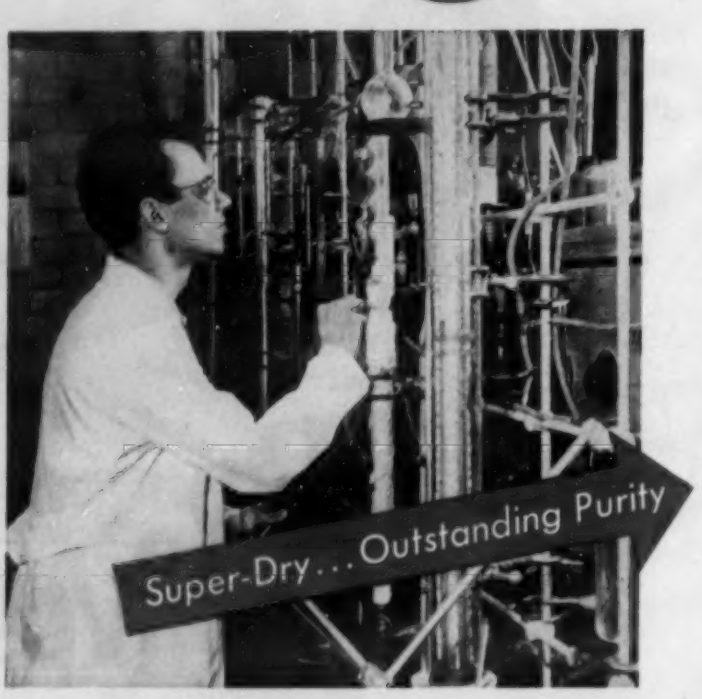
Pinellas Contractors' Group Pledges Policing

ST. PETERSBURG, Fla.—When the newly organized Pinellas Air Conditioning & Refrigeration Contractors Association here accepted its charter from Circuit Court Judge C. Richard Leavengood, it pledged members to police their industry against bad practices, it was announced recently.

APPR

Leading Refrigeration and Air

genetron®



Look at the stringent manufacturing specifications listed here for the principal "Genetrons." Note their exceptionally low moisture content. For example, "Genetron" 12 and "Genetron" 141 are so dry they contain less than ten parts of water per million parts of refrigerant. That's moisture equal to only one thousandth of one percent (0.001%).

The overall purity of "Genetrons" is equally good. See how low they are in non-condensable gases and low boiling impurities. And, remember the quality of current production consistently surpasses even these specifications. No wonder so many leading manufacturers now prefer "Genetrons" as original charge for their equipment!

genetron 12—WHITE LABEL
DICHLORODIFLUOROMETHANE

Quality Specifications

Moisture wt. %, max.	0.0010
Chlorides	none
High boiling impurities—vol. %, max.	0.05
Non-condensable gases (gases insoluble in perchloroethylene)—vol. % in vapor phase, max.	1.5
Boiling pt. at 760 mm. Hg °F.	—21.6
Boiling range °F (to 85% pt.), max.	0.9

genetron 141—GREEN LABEL
MONOCHLORODIFLUOROMETHANE

Quality Specifications

Moisture wt. %, max.	0.0010
Chlorides	none
High boiling impurities—vol. %, max.	0.05
Non-condensable gases (gases insoluble in perchloroethylene)—vol. % in vapor phase, max.	1.5
Boiling pt. at 760 mm. Hg. °F	—41.4
Boiling range °F (to 85% pt.), max.	0.9

genetron 11—ORANGE LABEL
TRICHLOROMONOFLUOROMETHANE

Quality Specifications

Moisture wt. %, max.	0.0015
Chlorides	none
High boiling impurities—vol. %, max.	0.05
Boiling pt. at 760 mm. Hg. °F	74.7
Boiling range °F (to 85% pt.), max.	0.5

For more information about products advertised on this page use Information Center, page 26.

Sears Offers Preseason Room Unit Sales Plan

CHICAGO—A plan for preseason sale of air conditioners with no monthly payments until May 1, was noted in the recent midwinter issue of Sears Roebuck & Co. sales book.

Either a $5 or $10 down payment will hold the air conditioning unit, it was reported. The "Kenmore" ½-hp. unit has been reduced from $214.50 to $179.50, with the ¾-hp. item cut $30 to $199.50, and the 1-hp. unit offered at $229.50.

The sales book, effective until Feb. 18, also lists a 10% down payment on fans with no monthly payments until May 1, it was pointed out. A 20-in., two-speed reversible portable fan retails at $39.95, down $6 from the fall catalog. A 20-in. wheel fan sells for $51.95, it was revealed.

Friedrich Names Air Conditioner Export Mgrs.

SAN ANTONIO — Reese L. Harrison, president of Friedrich Refrigerators, Inc., has announced the appointment of Harry D. Friedman and Philip H. Berritt as world-wide export sales managers with offices at 39 Broadway, New York 6, N. Y. for his company's room and commercial air conditioners.

The Friedrich room air conditioning line consists of nine models in the ¾, 1, and 1½-hp. range, all units equipped with automatic thermostat and two-speed cooling. The Friedrich commercial line consists of six models in the 3-hp., 5 hp., and 7½-hp. range for both air and water-cooled application.

Both types suit all markets.

Cory Acquires New Chicago Warehouse

CHICAGO — J. W. Alsdorf, president of the Cory Corp. just revealed that Cory has acquired a large, new warehouse on the city's near south side.

Cory is taking over a 180,000-sq. ft. multi-story structure at 25th and Federal Sts. This building will be used for combined warehousing not only for Cory, but also for its Fresh'nd-Aire, Nicro, Autopoint, and Mitchell Divs. and for its Flavor-Seal subsidiary.

According to Cory Traffic Manager Herb Kasper, Cory is spending over $100,000 in a widespread improvement program for this latest facility. Present plans call for the addition of electric shipping doors and large depressed shipping docks which can handle six trailer trucks at one time.

Amana Room Air Conditioners--

(Concluded from Page 1)

pacity, a single glider control, priced from $299.50 to $489.50 at retail.

2) The De Luxe line, in ¾, 1, and 1½-hp. sizes, for installation in standard and casement windows, claimed to have up to 15% more cooling power than previous models, adjustable installation in any one of 23 positions, diffuser vanes giving draft-free ventilation, thermostats, to sell at $319.50 to $419.50.

3) The budget-priced Scot line of room air conditioners, in ½ and ¾-hp. sizes, providing the cooling, dehumidification, filtration, and air circulation of air conditioning.

In the Year 'Round models any one of six different combinations of cooling heat, dehumidification, and ventilation may

AMANA room air conditioner with automatic timer and charcoal filter.

be selected by adjusting a single glider control across the top of the unit. The necessary switching of damper, compressor, and fans is accomplished automatically once the control is set.

Each of the seven control positions is color-coded and softly illuminated. A "chill-check" heating unit is provided for use during the late evening or early fall chills.

Both the Year 'Round and De Luxe models are designed for flush mounting as one of 23 possible installed positions. They are equipped with thermostats to automatically maintain the desired temperature.

They are constructed electrically to conform to the new National Electrical Code, so as to require less elaborate and less expensive wiring installations. Each of the ¾-hp. models has a current consumption of less than 12 amps and may be installed on a single outlet 15-amp circuit. The ½-hp. models may be installed on a 115-volt multiple outlet circuit.

Both lines are engineered for quiet, vibrationless operation. The metal case and internal parts are acoustically and heat insulated, with the front of the conditioners made of a sound-deadening plastic, in brown or ivory.

A feature of the units is the system of moisture removal. Water condensed by the units is mixed and vaporized in the air stream, eliminating a possibility of overflow and dripping outside the window.

Cooling power of Amana's Year 'Round and De Luxe room units has been boosted, it is said, by a newly-designed air flow system which can handle 20-25% more air than before. Involved in the new system are a 7-in. blower wheel, instead of 6½ in. as formerly, and a 12-in. 6-blade condenser fan instead of an 11-in. 4-blade fan used previously, and more powerful fan motors. A newly-designed condenser also contributes to better cooling.

Cabinets for Year 'Round and De Luxe units are interchangeable, so that all models will fit any opening more than 25 in. wide and 15 in. high.

The ½ and ¾-hp. Scot models, for operation on 115-volt lines only, are compactly constructed, in a 23-in. deep, flush mounting cabinet. A single vane deflector insures no-draft cooling. Operation of a fan-cool-off toggle switch controls operation of the unit. The Scot model cabinets are finished in a textured sand beige. They are designed to serve as promotional models, and for step-up selling.

OVED!

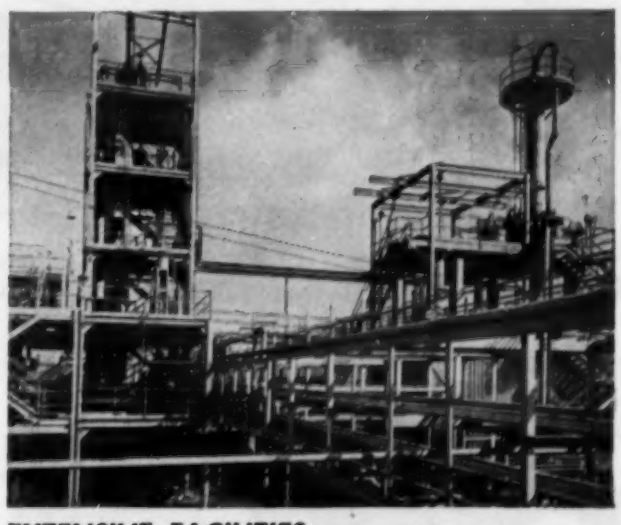
Conditioning Manufacturers All Approve...

Super-Dry Refrigerants

Few products have ever undergone such exhaustive examination as "Genetron" Refrigerants. Leading refrigeration and air conditioning manufacturers have checked and rechecked them intensively . . . proved for themselves that "Genetrons" meet or surpass their most exacting specifications for fluorinated hydrocarbon refrigerants.

Yes . . . in every case . . . "Genetrons" have been certified for the original or replacement charge in America's finest equipment. That's because they have been proved to be—

- Super-Dry—guaranteed exceptionally low moisture content.
- Non-toxic, non-flammable, stable, safe.
- Non-corrosive to standard equipment materials.
- Critical and freezing points well outside range of operating uses.
- Solvent action on oil helps prevent solidification or congealing of lubricant.
- Miscible with oil; aid in lubrication of equipment.
- Identical and interchangeable in all respects with comparable fluorinated hydrocarbon refrigerants produced by any other manufacturer meeting the same high standards.



EXTENSIVE FACILITIES:
In addition to its expanded "Genetron" production center at Baton Rouge, La., General Chemical has large new "Genetron" facilities at Danville, Ill.

AVAILABLE EVERYWHERE!
Coast-to-coast, America's leading Refrigeration and Air Conditioning Wholesalers feature *"Genetron" Super-Dry Refrigerants.* There's one as near to you as your telephone ready to supply you with complete stocks of *"Genetrons"* and with up-to-the-minute data on their uses.

Basic Chemicals for American Industry

GC Allied Chemical

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

See your refrigeration wholesaler

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

With Frigidaire since 1936, "Pete" also was active in the National Electrical Manufacturers Association. Most recently he helped direct NEMA's successful national campaign to clean up the abandoned refrigerator menace.

The Sphar Brick Co. one of the oldest and largest face brick manufacturers in Kentucky, is scheduled for bigger things under Peters' leadership. Established in 1904, it traces its brick-making know-how back over a hundred years to family artisans in Germany. Today it owns extensive clay beds on the Ohio River, and specializes in a red sand-finished Colonial style brick.

Distribution in the past has been limited to Kentucky and the Cincinnati area. "Pete" plans to expand facilities and open up additional markets.

NOW let's tell the REAL story. In his young and vigorous early fifties, Mr. Peters could have parlayed his experience, contacts, knowledge, and connections into any of many jobs in his chosen field. But, his corporation contract prevented him from accepting a lucrative job with a competitor.

Otherwise he'd have to forfeit a substantial accumulation of deferred pay. No doubt G-M is smart in thus preventing key men from competing with any of its divisions in the future. (Other big corporations have similar provisions in employment contracts for key personnel. They make it worthwhile for a top man not to damage their business.) And Peters isn't complaining. He just wants old friends in our industry to know why he is in a new and entirely different line of work.

What's In a Name?

Minnesota Mining and Manufacturing Co. was founded half a century ago to work with corundum. Sandpaper was its principle business until the adhesive tape known as "Scotch brand" was developed. This was a 10-strike.

First used as a masking tape, adhesive was applied only to outer edges of the strips. The partially glued tape didn't stick too well. A painter wrote to the factory:

"Why be so Scotch with the adhesive?"

From then on it was fully coated—and had a name which made it famous.

Knowing what kind of problem is worthwhile to attack is more important than the mere carrying out of an attack.—ALBERT MICHELSON (Nobel Prize Winner).

News stories refer to Kruhschev as a high Russian official. True, and about midnight he's even higher.—*Detroit News.*

Business Definitions

Unparalleled demand — Ten orders in the same mail.

Senior partner—Dad, who has nothing to do between trips to Florida.

Promising young executive—Son of a fraternity brother.

Junior partner—Boss' son.

Memo—The devastating rejoinder you couldn't think of during earlier face-to-face discussion.

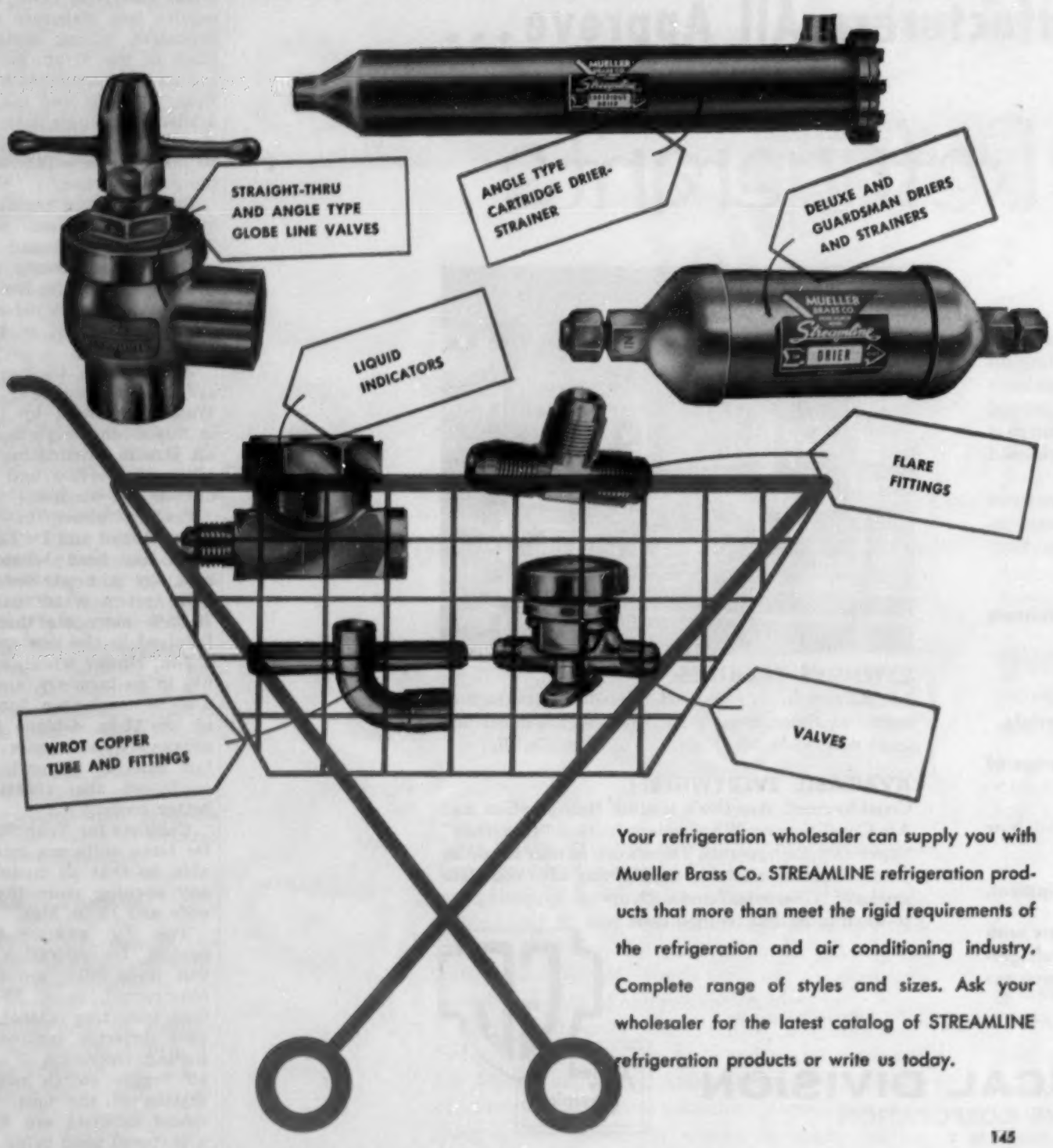
Consolidating our position—We didn't make any money on this adventure.

Benefit of my thinking—This is the way it's gonna be.

ONE STOP SHOPPING

FOR ALL REFRIGERATION PRODUCTS

MUELLER BRASS CO. MANUFACTURES A COMPLETE LINE OF VALVES, DRIERS, FITTINGS AND ACCESSORIES FOR EVERY NEW COMMERCIAL INSTALLATION AND EVERY REPLACEMENT NEED . . .



Your refrigeration wholesaler can supply you with Mueller Brass Co. STREAMLINE refrigeration products that more than meet the rigid requirements of the refrigeration and air conditioning industry. Complete range of styles and sizes. Ask your wholesaler for the latest catalog of STREAMLINE refrigeration products or write us today.

145

MUELLER BRASS CO. PORT HURON 9, MICHIGAN

Utilities and Air Conditioning

1708 Western Ave.
Ft. Worth, Texas

Dear "Dope":

Upon my return to Ft. Worth I contacted a friend who is in charge of air conditioning promotion for the local utility company who have done an excellent job in promoting air conditioning loads. The following are some thoughts that he had that might be of interest.

1. They originally pushed air conditioning in order to balance their heavier winter electrical load. For the last three or four years however, the summer electrical load is far greater than the winter load, and they are in the position of promoting the use of the heat pump to bring up the winter load. They indicate that all their promotional effort in the future will be in the direction of the heat pump.

2. In spite of a swing to a heavy summer load, he feels that no private utility with a profit motive can afford to sit back and not promote. The gas industry, if they get the proper residential unit, are straining at the leash and will present real competition as pipe lines are finished and areas convert to gas. These pipe lines will need loading for the entire year, and the problem of servicing residential air conditioning customers is probably simpler from the gas system than from the electric system.

3. He feels that a logical starting point would be to push the commercial market first, and the residential market will naturally follow as air conditioning at the office breaks down air conditioning of the home. In addition, the commercial areas will be easier to service.

4. He recommends a study of the possible air conditioning load for every utility in the form of a comprehensive market survey. A study of the net profit that would result from increased summer loads might suggest that the utility increase rates or go out and sell the idle capacity. He feels that either of these alternatives is far better than an outright charge to the customer for bringing the electrical service to his home for air conditioning.

5. He suggests as specific measures for promotion that they had successfully used extensive advertising programs, a customer service, representatives familiar with air conditioning and the profits it can bring, working directly with potential customers and working hand in hand with dealer and contractor groups in establishing codes and minimum standards to assure proper installations and service and satisfied customers.

I certainly appreciated the opportunity to talk to you and I hope you might find a little something out of the above that might be of value.

T. J. SMALL

Shillinglaw's Chartered

ROCK HILL, S. C.—Shillinglaw's, Inc. here has obtained a charter from the Secretary of State to install and service heating and air conditioning equipment. Authorized capital stock is $30,000. William D. M. Shillinglaw is president.

For more information about products advertised on this page use Information Center, page 26.

Whirlpool-Seeger Opens 5 Regional Sales Offices

ST. JOSEPH, Mich. — The opening of five regional sales offices for Whirlpool-Seeger Corp. was announced recently by Jack Sparks, general sales manager, distribution.

The eastern regional office is at 630 Fifth Ave., Suite 1753, New York 20, N. Y. Harper Dowell is regional manager.

The southeastern regional office is in the Fulton National Bank Bldg., Suite 621, Atlanta 3, Ga. Riley N. Stone is regional manager.

The midwestern regional office is in The Merchandise Mart, Suite 1112, Chicago 54, Ill. Walter A. Summers is regional manager.

The southwestern regional office is in The Meadows Building, Expressway at Milton, Suite 334, Dallas, Texas. James V. Baxter is regional manager.

The western regional office is in The Equitable Building, 6253 Hollywood Blvd., Hollywood 28, Calif. Peter N. Prussing is regional manager.

MacDonough Is V. P. At Crosley-Bendix

CINCINNATI — William A. MacDonough has been appointed vice president of Crosley and Bendix Home Appliances Divs. of Avco Mfg. Corp. in addition to his duties as director of advertising and sales promotion, according to President Chester G. Gifford.

MacDonough

MacDonough has served in various advertising and merchandising capacities with Avco.

Crosley-Bendix Sales Promotion Includes NBC Comedy Hour Sponsorship

CINCINNATI — A $6,000,000 national and local advertising program, paced by the Sunday night NBC Comedy Hour and an average of a page a week in *Life*, has been set up by Crosley and Bendix Home Appliances to promote their products between now and May 31.

The campaign, which will have dealer tie-in promotions with almost every printed ad and television commercial, has been named "A Twenty-Week Power Pattern," by W. A. MacDonough.

"Crosley and Bendix will co-sponsor the new Hollywood-originating 'NBC Comey Hour' program from 8 to 9 p.m. each Sunday night,

Servel Ups Bowser To Div. Sales Head

EVANSVILLE, Ind. — Harry Bowser, formerly director of sales development, has been promoted to sales manager of the home appliance sales division of Servel, Inc.

H. Bowser

Announcement of his promotion was made by Richard S. Testut, vice president and general manager of the division. Bowser succeeds Roland D. Payne, who has resigned.

The new sales manager came to Servel last August after having served as director of sales development and field sales manager of L. Bamberger, Newark, N. J.

Quicfrez Refrigerators, Ben-Hur Freezers To Make Duncan Hines Line

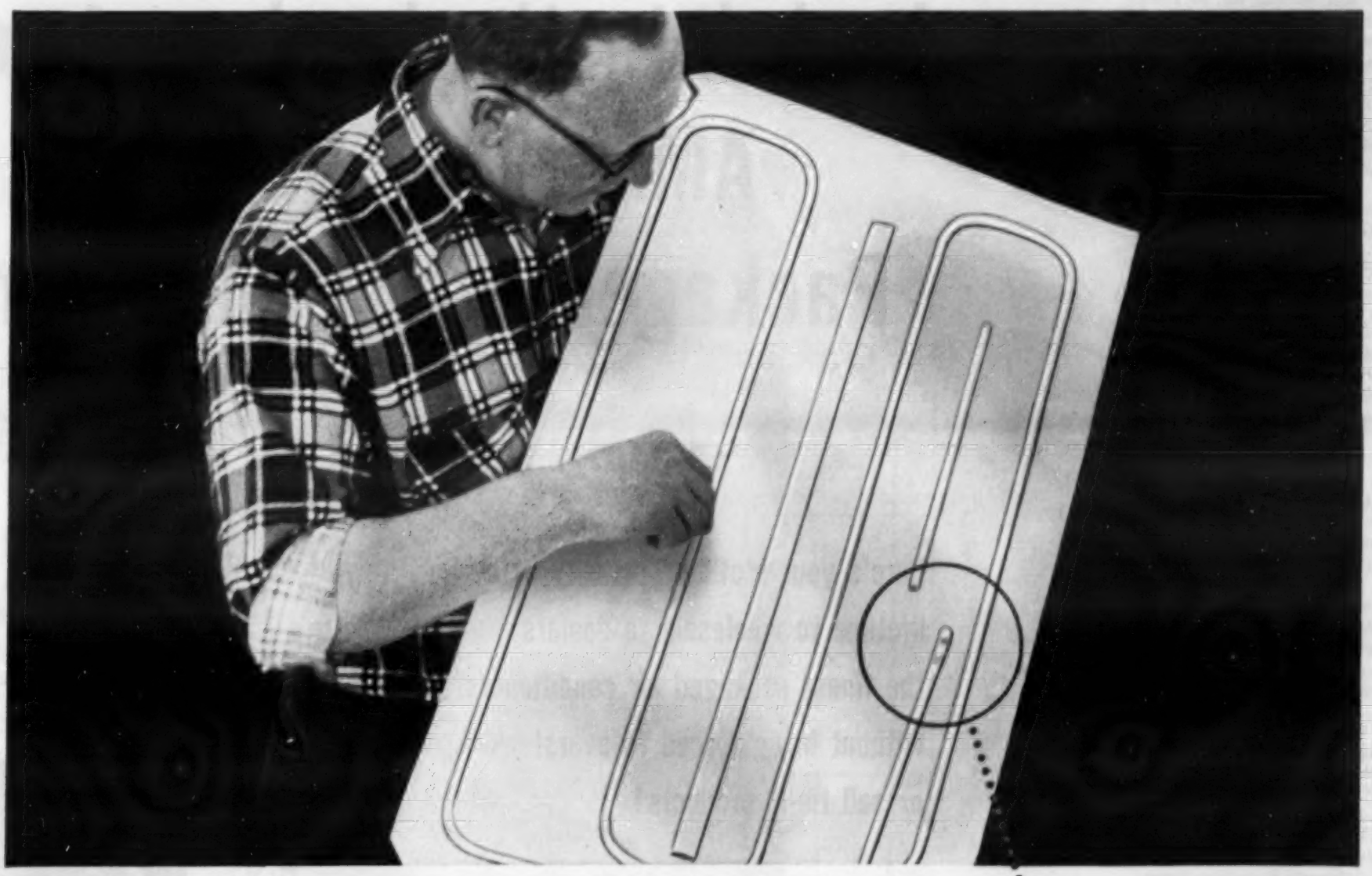
duncan hines lines—jos 1-3-56 b

ITHACA, N. Y. — Quicfrez, Inc., Fond du Lac, Wis., and Ben-Hur Mfg. Co., Milwaukee, will market refrigerators and freezers, respectively, bearing the Duncan Hines label.

This will mark the entry of the Duncan Hines name into the major appliance field. The label moved into the small appliance line last year, appearing on an electric coffee maker and a toaster as well as on a pepper mill and an outdoor barbecue grill.

Quicfrez has contracted to make four refrigerator models now and two more later.

Ben-Hur will manufacture five freezer models — three chests and two uprights.



BOHN COLD WELDING

reduces final tubing dehydration 50%
—at less cost than other methods!

Bohn's Cold Welding method of sealing aluminum refrigeration tubing is far more positive and yet less expensive. This gives Bohn customers a *two-way saving:*

(1) The original cost of Cold Welding saves money over other methods.
(2) Moisture content in grams per sq. ft. of internal surface can be held well below the maximum acceptable for refrigeration components.

This reduces the customer's dehydration time by more than 50%.

BOHN'S COLD WELDING *method of sealing refrigeration tubing is the most positive and least expensive*

EVAPORATORS • ACCUMULATORS • FREEZER PLATES • TUBING • REFRIGERATION COILS

BOHN ALUMINUM AND BRASS CORPORATION
1400 LAFAYETTE BUILDING • DETROIT 26, MICHIGAN

Sales Offices | BOSTON • CHICAGO • CLEVELAND • DAYTON • DETROIT • INDIANAPOLIS • LOS ANGELES MILWAUKEE • MINNEAPOLIS • MOLINE • NEW YORK • PHILADELPHIA • ROCHESTER • ST LOUIS

For more information about products advertised on this page use Information Center, page 26.

Air Conditioning Trend In Schools Growing Despite Other Shortages

LOUISVILLE, Ky. — Strange as it seems, public schools are increasing capital expenditures for air conditioning—and also movie projectors, television, hi-fi systems, and automatic business machines, while educators and citizens are discussing shortages of funds, teachers, and classrooms.

Public schools are feeling the first signs of a new trend to "automation," paralleling the boom in electronic control of industrial plant and office operations, according to Charles S. Stock, marketing executive of American Air Filter Co. here, manufacturer of Herman Nelson ventilating, heating, and air conditioning equipment for schools.

School administrators and planners are facing up to the probability that the current shortages of teachers and school facilities are more permanent than temporary, Stock said. The current rate of schoolhouse construction is meeting only half the need, and universities are currently graduating only half enough professionally trained students to meet the demands in teaching, engineering, medicine, and law.

School people who have sought for years to reduce classes to an educationally "ideal" size of 25 to 30 children, must adjust their thinking to the probability that classes of 40 to 50 may become common, particularly in high schools, he stated.

Despite current talk about "cutting school construction costs," there are many indications that the total capital investment per classroom, per teacher, and per pupil will increase, rather than decline, Stock reported. Among them:

Increasing summer quarter enrollments in Chicago high schools, and studies of "11-month programs" for high schools in a number of cities around the country.

Passage of a $1,000,000 bond issue by Phoenix, Ariz., including provisions for installing modern chilled water air conditioning in both elementary and high schools.

The *Arizona Republic* commented editorially on the Phoenix bond issue; "School children are as much entitled to the comfort of adequate temperature control as anyone else. At least that must have been the 'taxpayers' opinion when they approved the $1,000,000 bond issue."

The trend to air conditioning in schools, which started in mild southwest and west coast climates, is beginning to move northward, as it has in homes and offices, Stock reported. Summer sessions in high schools, and increased use of films and TV, which require both darkened rooms and fresh air, are speeding the trend, he said.

Denver, Dallas, Bakersfield, and Chico, Calif., Jal, N. M., and New Orleans have recently built classrooms with chilled water air conditioning, and cities as far north as Schenectady, N. Y., and suburban Chicago are making provisions for summer cooling in their projected school building programs, he stated.

Adequate year-round air conditioning has been installed in west coast schools for prices ranging from $1.80 to $1.90 per square foot, he pointed out. This compares with about $2 per square foot for conventional unit ventilators, supplied by steam or hot water, in northern and eastern areas, Stock said.

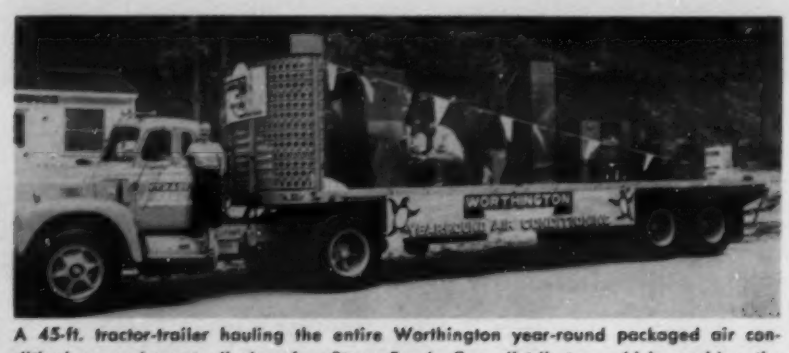
"We believe a contributing factor to the low cost of year-round school air conditioning has been American Air Filter's development of chilled water Herman Nelson 'Amervent' units, which use outdoor air to cool down classrooms at night, as well as on milder days, and call on refrigeration equipment only in the warmest periods."

Rolling Packaged Display Building Sales to Dealers

DALLAS—Straus-Frank Co.'s rolling display of Worthington packaged air conditioning equipment is beginning to show results in sizeable orders, Edward W. Norwood, sales manager, announced recently.

The 45-ft. tractor trailer—nucleus of this wholesaler's promotion program known as "Operation Roadshow" started its travels in August. It carries the entire Worthington packaged equipment display to the Straus-Frank dealer organization in Texas, as well as contractors on building project sites. Some of these visits have resulted in firm orders in carload quantity.

"Our rolling display," says Norwood, "has enabled us to take the packaged line to our dealers and prospective dealers, and pitch to all members of the organization from owners and engineers to the office force, mechanics, and sheet metal men. The reaction is the same everywhere the truck goes—large cities and small—tremendous enthusiasm for our entire program."



A 45-ft. tractor-trailer hauling the entire Worthington year-round packaged air conditioning equipment display for Straus-Frank Co., distributor, which enables the firm to show the line to dealers and prospective dealers. Tremendous response is reported—and homing pigeons are used to dispatch fast orders from the field.

One unique phase of the program is the use of homing pigeons to dispatch fast orders from the field!

After the roadshow has completed its tour, Norwood expects to use the Worthington packaged air conditioners in Straus-Frank's service schools which are being planned for January and February, for live demonstrations and participation meetings.

Look into the low-investment AMERICAN BLOWER Packaged Air Conditioners!

Here's your profit opportunity of a lifetime to wholesale to dealers the finest packaged air conditioners... without being forced to overstock *or* sell tie-in products!

You don't have to sell air conditioning; people already want it. You don't have to sell the American Blower name; people respect it, know it through national advertising. *And* you don't have to tie up capital in "too much" inventory with American Blower Packaged Air Conditioners . . . for our low-investment plan lets you buy in less-than-carload lots!

As an American Blower wholesaler, you get this red-hot item — that's competitively priced — for a market that's booming, with no end in sight (and you're not required to handle tie-in products!). In addition, you get the backing of an aggressive, growing company — plus these extras that enable you to more than meet competition: (1) units with 3- thru 20-ton capacities to satisfy practically every dealer need; (2) 5-year warranty on entire refrigeration circuit; (3) national advertising support; (4) liberal cooperative plan for local advertising, and free sales promotion material.

Choice, protected territories are available on a first-come-first-served basis—so mail coupon today for complete data on our stocking plan and franchise—or write, wire, or phone.

For more information about products advertised on this page use Information Center, page 26.

9 Heat Pumps Cut Store Cleaning Cost, Up Morale

CHATTANOOGA, Tenn. — Nine General Electric "Weathertron" heat pumps installed in the Sterchi Bros. store here "have been the most talked about thing since this store opened many years ago."

So stated J. H. Coleman, store manager, in a letter to Tom Gregory of Universal Roofing & Insulation Co., installing contractor. (Distributor on the job was Radio & Appliance Corp.)

"Our employes still do not believe it possible to work under such pleasant conditions," Coleman said.

"We have noticed a complete change in the maintenance of cleaning in our store. Besides being one of the hottest spots in the country, Chattanooga is also an industrial town; therefore, we have a serious smoke and dirt problem.

"These units change the air rapidly enough to keep dust and smoke from settling on the furniture. You have no idea how appreciative our maids and porters are of this one feature."

He added: "I hope you realize the comfort and convenience you have brought to our customers and employes."

New Firm Organized

McALESTER, Okla. — Announcement of a new air conditioning, heating, roofing, and sheet metal firm, H. H. Smallwood & Co., was made here recently.

The business, formerly headed by Ernest H. Smallwood, is now headed by Harold H. Smallwood and Carl E. Thain. It is located at 426 S. Main St.

Viking Air Conditioning Changes Name to Viking Air Products

CLEVELAND — Viking Air Products is the new name of Viking Air Conditioning.

The new name for Viking, a division of the National-U. S. Radiator Corp., more accurately describes its manufactured line, which includes furnace blowers, blower packages, duct blowers, blower wheels, furnace and duct humidifiers, attic fans, window and circulating fans.

"A leader in the air movement equipment field for over 20 years, Viking no longer manufactures actual window and central air conditioning units or compressor-operated dehumidifiers, although it supplies components to the air conditioning industry."

AIR conditioner in right background of this section of Victoria Vogue plant is equipped with clock damper so it alternates daily in serving production cafeteria and uniform changing area.

Air Conditioning Protects Co.'s Intricate Machines, Cuts Powder Puff Rejections

GLENDALE, N. Y.—Modern automation aided by air conditioning has now been applied to the manufacture of powder puffs.

At the local plant of Victoria Vogue, Inc., a series of special "automation" machines designed and developed exclusively for the company are now being used to weave, convert, and process cloth into Victoria Vogue powder puffs.

The intricate machines, many parts of which are extremely susceptable to temperature change or high humidity, are protected by an air conditioning system installed earlier this year.

Because of the temperature and humidity control provided by the system—which consists of seven Airtemp 8-ton water-cooled packaged air conditioners—the firm reports that no major breakdown, involving the special production machines, was encountered during the past summer.

In addition to equipment protection, the air conditioning system also provides working comfort for employes, the majority of whom are women.

One packaged unit is equipped with a special clock damper, which directs conditioned air to the company's cafeteria during lunch hour and at the end of the day to the area when uniforms are changed.

"Because of their filtering action, the packaged air conditioners keep the factory area practically dust and lint free, which is very important to the manufacture of our particular type of product," a company official said. "One result of the combination of humidity and dust control has been that far less material has had to be rejected by our inspection department because it was soiled during processing or handling.

"Similarly, air conditioning has reduced the amount of time previously devoted to machinery and plant maintenance."

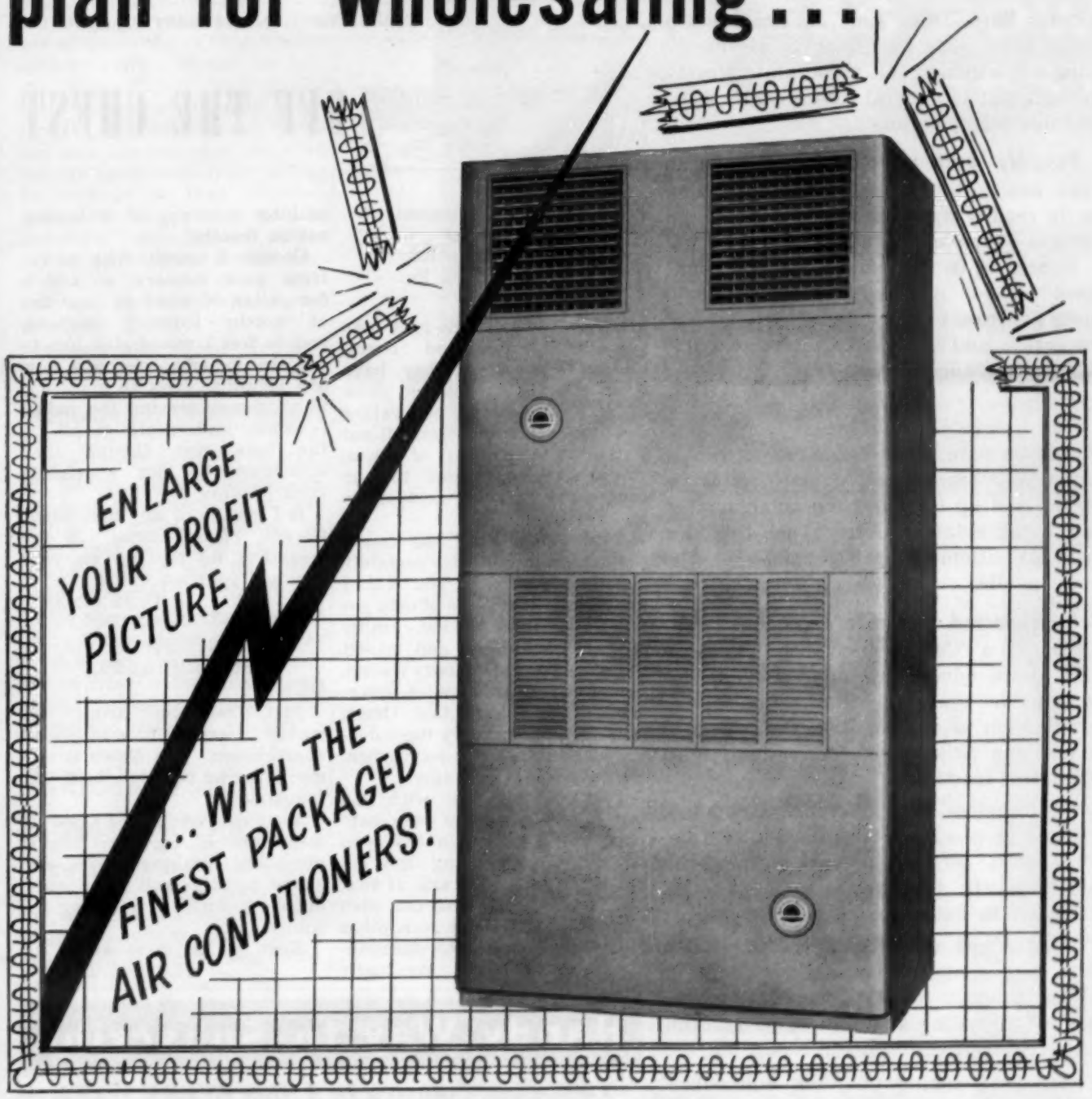
Kennard Opens 3 New Sales Offices

ST. LOUIS—Opening of three new sales offices in Rochester, N. Y.; Rockford, Ill.; and Jackson, Miss., has been announced by Kennard Corp., manufacturer of commercial and industrial air conditioning equipment.

Ben M. McDougall, sales manager of Kennard, said opening of these engineering sales offices "is in line with forecasts for an over-all increase in air conditioning sales in 1956."

The new sales representatives are R. C. Black Co. of Rochester, with a branch office in Buffalo; R. E. Burden & Son in Rockford; and A-T-M Gas Equipment Co. in Jackson.

plan for wholesaling...



AMERICAN 75 ANNIVERSARY YEAR 1881 - 1956 **BLOWER**

Packaged Air Conditioners — that cool without chilling

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN

Division of American-Standard

Yes! I am interested! Please have your representative call.

Name_____ Firm_____

Address_____

City_____ Zone_____ State_____

They'll Do It Every Time

by Jimmy Hatlo

BIGDOME GIVES BLOODSTONE, HIS CREDIT MANAGER, A HARD TIME FOR NOT NEEDLING THE SLOW-PAY CUSTOMERS---
B-BUT, CHIEF--- I--I--
NEVER MIND THE EXCUSES! YOU'RE SUPPOSED TO CRACK DOWN ON OUR DELINQUENT ACCOUNTS!! I DON'T CARE WHO THEY ARE!! IF YOU CAN'T DO IT, WE'LL GET SOMEBODY WHO CAN---
SO BLOODSTONE REALLY WENT AT IT--- 'S BOSS-O HAPPY NOW? NOT SO'S YOU COULD NOTICE IT, PAL--- LISTEN ....
BLOODSTONE! YOU NINCOMPOOP! SENDING A THREATENING LETTER LIKE THIS TO MOTHWALLET--ONE OF OUR BEST CUSTOMERS! DESTROYING THE GOOD WILL IT TOOK ME FORTY YEARS TO BUILD UP--G#%!!--
B-BUT---
THANKS AND A TIP OF THE HAT!! HAT TO FRED S. HOLLIS, COURTHOUSE, GENESEO, N.Y.
11-8

How Can Our Industry Promote Air Conditioning's Health Values?

Good health is involved inextricably with air conditioning.

Nearly everybody in our industry believes that. Trouble is, this implicit belief so far hasn't been properly documented. It should be; and can be, we believe.

Last year the Internal Revenue Bureau announced that air conditioning purchased for the relief of heart troubles, asthma, and other pulmonary diseases could be considered a deductible item on the sufferer's income tax—if the unit was prescribed by a doctor.

Almost simultaneously heart specialists at the Benjamin Franklin Clinic in Philadelphia declared that air conditioning helps older people live longer. Dry, clean, cool air is beneficial to their circulatory systems and recuperative powers.

Furthermore, all modern hospitals utilize air conditioning for their premature babies sections, operating rooms, recuperating rooms, and "critical" wards. Aren't these facts proof that the health values of air conditioning are signal?

Nine years ago, in a speech delivered to air conditioning industry "brass" at Hot Springs at the behest of George Jones (who is now President of ARI) your *AC&RN* editorialist sprung what was then a surprise theme, to wit:

"To sell air conditioning, link it with better health."

All previous air conditioning advertising had concentrated on its utilitarian (dollars and cents) benefits, plus *comfort*. In the future, we suggested, GOOD HEALTH might be a better promotional theme.

Actually, it can be. Air conditioning filters out germs, preserves proper temperature and humidity (thus making people happier and better tempered) obfuscates minor ailments like common colds and hay fever, and quiets children (thereupon preventing exhaustion—especially on the part of parents—which invites communicable diseases).

Yet, our industry has done little to *prove* this universally accepted practical theorem. Sure, from time to time health benefits have been hinted at in air conditioning advertising. But these hints largely have been put in general terms—with scant acceptable scientific proof.

Possibly much more now is known as to the health benefits of air conditioning than is readily apparent to customers and prospects—or even to advertising agencies!

Hence, let us suggest that a paramount project for our industry should be a continuing program to collate all such scattered information, and to make this data available to air conditioning contractors, dealers, and salesmen.

Our industry's only weekly newspaper, you can be sure, will cooperate. At least twice a year since 1946 AC&RN editorials have pointed up the need for amalgamated action by all manufacturers to sell this idea of air conditioning health values to the general public.

Unsupported statements about air conditioning as a "Cure-All" could be blown up into a quack advertising approach, or into objectionable "scare advertising," of course. Fear of such negative action thus far has blocked this Sell-Health idea—along with apathy and inertia.

Nevertheless, five industry leaders whom we count as good personal friends still believe that a correlated research program could separate fact from fancy in this obviously-true-but-unsubstantiated area.

Aside from contributing to the better health and general welfare of mankind, such a program would provide the most potent of all selling ammunition to doubting housewives and tight-pursed husbands.

So, we're asking *you*, Mr. Subscriber:

What can you contribute to this Worthy Cause in terms of case histories, personal experiences, etc.?

Your letters to THE NEWS on this subject could and should help everybody in our fledgling industry to attain the goals expected of us, and which you hope to attain yourself.

Nations get the politicians and the critics they deserve; there is room for improvement in both fields; and it is for us, the common voters and the common readers, to demand and to effect this improvement.—ALBERT GUERARD.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office; Est. 1936

AIR CONDITIONING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

Published Every Monday by BUSINESS NEWS PUBLISHING CO., 450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924. Subscription Rates: U. S. and Possessions and Canada: $6.00 per year; 2 years, $9.00; 3 years, $12.00. All other countries: $10 per year. Single copy price, 40 cents. Ten or more copies, 30 cents; 50 or more copies, 20 cents each. Send remittance with order.

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VOLUME 77, NO. 4, SERIAL NO. 1,401, JANUARY 23, 1956

OFF THE CHEST

Refrigeration Components & Accessories
521 Glen Echo Rd.
Philadelphia 19, Pa.

Editor:

Several times in the past year you have mentioned Frank Cockrell's ideas as they have been reflected in today's views of our industry. He had rather definite ideas and I went all out for quite a number of them, which proved helpful to our progress and I am certain, to me, personally.

Your "Gold Seal" air conditioning units editorial certainly is a step forward. You will, I am certain, recall the efforts put forth by John Wyllie, Harry Alter, Bill Aubrey, and myself to centralize the industry's aims, cut down the number of industry groups (35 at that time), establish a laboratory for industry standards, train servicemen, etc., a dozen years ago.

I talked this over with you and felt that we had your support, and I'm certain that you not only went along but did much to assist. My aim at that time was to centralize this plan through ASRE. However, other interests did much to disorganize this plan and eventually nothing concrete, of a lasting nature resulted.

George, I merely wish to refresh your memory, to add a few sticks of wood to your fire of worthy industry projects, and to feel I would still like to see the industry, perhaps now less selfishly, grow to maturity, in all senses serving the public—which, underneath it all, is the boss—even though they sometimes do not appreciate their position.

If I can be of any assistance, George, please advise. In the meantime, my best to you, your son, and your associates.

C. R. LOGAN

Fogel Refrigerator Co.
Philadelphia, Pa.

Editor:

Just returned from my travels. Here's a note of honest appreciation. The NEWS is still my favorite publication of the Industry.

Your column "Inside Dope" is inspirational. A genuine help in my public speaking efforts, as I shame-facedly pass your anecdotes off without revealing the source.

Keep up the good work!

MAURICE ZATKO

Handy Way to Subscribe

To See the Industry In Action EVERY WEEK

Keep up-to-date on what's going on in your industry. You'll see action weekly in AIR CONDITIONING & REFRIGERATION NEWS. Covers latest news and gives you top how-to-do-it reports on commercial and residential air conditioning, commercial and home refrigeration: manufacturing, contracting, distributing, retailing, and servicing. Read the Industry's newspaper for profit every week. Only $6.00 per year, 52 issues.

AIR CONDITIONING & REFRIGERATION NEWS 1-23-56
450 W. Fort St., Detroit 26, Mich.
Gentlemen: Send the NEWS every week for one year. ☐ $6.00 enclosed ☐ Bill me ☐ Bill Company.

Name.....
Company.....
Street.....
City ..... Zone ..... State .....

Supermarkets, Dairies Learn Round-the-Clock Milk Vendors Up Sales

DETROIT — Outdoor milk vendors can be a boon to supermarkets and dairies through increased milk sales, according to a recent nationwide survey made for Ex-Cell-O Corp. here.

Authorizing the study because it is the largest manufacturer of machines for packaging milk in waxed cartons, Ex-Cell-O states vendor owners were "unanimously agreed" that the round-the-clock salesmen encourage milk consumption.

Supplementing normal milk channels, operators reported up to 400 half-gallon cartons sold daily, with one claiming 700 in a 12-hour period.

Nights and Sundays (also holidays) are peak sales periods, according to the survey. Operators agree that by making milk available 24 hours a day, vendors produce sales that otherwise would be lost.

Location is an important factor in successful selling, vendor operators were quoted as saying. Supermarket parking lots are regarded as excellent sites. Service stations are very popular, and one dairyman reported his top sales came from setting up vendors at busy intersections. Surprisingly high sales to motorists were noted when replica giant milk carton vendors were situated along well-traveled highways, the report continued.

Accessibility, good lighting, strategic location, easy installation, low rental, and signs are important, the study pointed out.

In a recent speech, Len Kanter, editor of *Food Topics*, emphasized the "tremendous potential" of outdoor vendors. He added that "the surface is only scratched along this line," Ex-Cell-O reported.

The survey cited customers as liking "convenience, not having to fight the parking problem, and no need for formal shopping attire," among their reasons for patronizing outdoor vendors.

R&R Supply Moves To New Building

ORLANDO, Fla.—R & R Supply Co., Inc., refrigeration parts and equipment wholesaler here, recently moved to a new building at 435 N. Parramore St.

H. T. Claiborne said the new building has 5,000 sq. ft. of warehouse space and 1,500 sq. ft. of sales room and office space. The property also includes 7,500 sq. ft. of off-street parking.

MARSH
Instruments

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.
PRESSURE GAUGES and Dial Thermometers for all services.
MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.
MARSH INSTRUMENT COMPANY
Sales Affiliate of Jas. P. Marsh Corporation
Dept. D, Skokie, Ill.

Sherer-Gillett Co. Names Niedhardt

MARSHALL, Mich.—Sherer-Gillett Co. has announced the appointment of Graham B. Neidhardt as refrigeration engineer.

G. Neidhardt

Neidhardt was formerly associated with Bally Case & Cooler Co. as refrigeration engineer. Previous connections included positions as chief engineer for Sunroc Refrigeration Co., Glen Riddle, Pa., and the C. Nelson Mfg. Co., St. Louis.

Neidhardt graduated from Purdue university with a bachelors degree in mechanical engineering.

Since graduation he has followed the profession of refrigeration engineer except for a period from 1941 to 1945 while serving as a first lieutenant of ordnance at the Aberdeen Proving Grounds, Maryland.

Master Baker Beck To Show New Frozen Dessert Methods

TROY, Mich.—A New York City master baker, Theodore Beck, will demonstrate preparation and baking techniques for frozen desserts, such as ice cream pies, to Michigan bakers on Feb. 14 and 15 at the Jentzen Miller Co. here.

The event is sponsored jointly by Jentzen Miller and the Frigid Igloo Mfg. Co., which will display its latest models in low temperature display cases. Frigid Igloo equipment will be used in the baking demonstration.

The demonstrations will begin at 1 p.m. each day.

Punxsutawney Adds 3 Representatives Due To Increased Volume

PUNXSUTAWNEY, Pa. — Planned expansion of production facilities and increased business volume has caused Punxsutawney Co., manufacturer of "Beverage-Air" cooling equipment here, to add three new field representatives, it was announced recently.

Alfred Silberman, formerly in the dairy business, will contact New England and western New York distributors from his Saratoga Springs, N. Y. office.

Alfred Wallahan will operate from Omaha, Neb. and cover Minnesota, Iowa, Nebraska, North and South Dakota, Montana, Wyoming, and Colorado.

Houston, Texas will be headquarters for Flint A. Pendergraft, who will operate in Texas, Oklahoma, New Mexico, and part of Louisiana. He also has much experience in commercial refrigeration, the report continued.

Items sold by Punxsutawney include an automatic beer dispenser now being field tested, heavy duty water coolers, refrigerated backbar and storage cabinets, display merchandisers, and ice cream storage and dispensing cabinets, the company said.

Carrier-Bock Absorbs Bock

DALLAS — Carrier-Bock Co. here, air conditioning contractor, recently absorbed the Bock Corp., distributor of Carrier packaged equipment, I. I. Bock, president, announced.

The merged company will concentrate on Carrier air conditioners, both in packaged and contract phases.

Anyway you look at it . . .

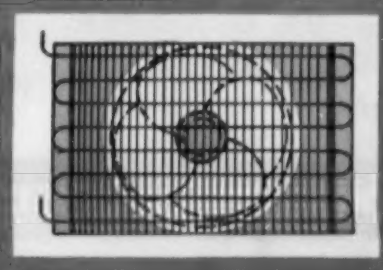
PEERLESS POWER-PACK IS THE BEST BUY

HERE IS EFFICIENT DESIGN

FAN MOTOR IS SHOWN MOUNTED IN HEART OR CENTER OF DRUMHEAD COIL

The Peerless Drumhead coil is a continuous finned tube without soldered return bends. 100% of evaporative surface is in the air stream. Motor is located in center of coil. This design gives highest B.T.U. transfer rate per foot of finned coil surface in the smallest possible space.

HERE IS WASTE



Red area shows how return bends and finned areas are out of circular air stream. Dead area opposite motor is also in red. Tests show B.T.U. loss ranges from 10% to 25% with this design as compared to Drumhead design.

Size for size the Peerless Power-Pack Unit Cooler is the most efficient on the market. Because of its round Drumhead coil design all primary and secondary evaporative surfaces are directly in the fan air stream. Cooling capacity is not wasted. Savings, possible in manufacturing, are passed on to you in terms of *lower cost.*

More Net Useable Storage Space In Any Fixture

In reach-in boxes, back bars, display cases, vending machines and all types of mechanically cooled fixtures the compactness of Power-Pack Units provide more useable storage space. With more than 1,000,000 of these coils in use today you can be sure of customer satisfaction with the Power-Pack.

Write for literature and prices.

SINGLE POWER-PACK available with decorative shield and drip pan as shown or with standard circular casing and fan guard. Capacity: 85 to 135 BTU/HR/1° T.D.

Can be mounted in any position

TWIN POWER-PACK has drumhead coils at either end. Available also as stripped model without casing. Capacity: 150 to 300 BTU/HR/1°T.D.

Buy Peerless and save the difference

PEERLESS OF AMERICA, INC.
MANUFACTURERS OF REFRIGERATION AND AIR CONDITIONING COILS SINCE 1912
DEPT. H, 5830 NORTH PULASKI ROAD, CHICAGO 30, ILLINOIS, U. S. A.

'Building Block' Cooling Unit Designed for 'Glass Walls'

Easy To Install, It's Said To Reduce Costs In Older Buildings

ONLY A FOOT HIGH, Carrier Corp.'s new Modular Weathermaster room units can be placed at the base of all-glass walls without detracting from design.

IN OLDER BUILDINGS, baseboard and electrical outlets do not have to be moved and unit is out of way of cleaning crews.

SYRACUSE, N. Y.—A "revolutionary" new development in "Conduit Weathermaster" air conditioning units designed to bring simpler and more economical installations of Carrier Corp.'s "dial-your-own-weather" central system for multi-story buildings has been announced by the firm.

Charles V. Fenn, vice president of Carrier's Machinery and Systems Div., described the new "Modular Weathermaster" units as the greatest forward step in air conditioning for office buildings, hospitals, and hotels since the company perfected this space-saving, high velocity induction system during the late 1930's.

"The new Modular Weathermaster 'building block' units are designed to meet the needs of newer glass-wall architectural designs and at the same time to simplify and reduce the cost of quality installations in older buildings," he said.

"The new Weathermaster units take even less space in the room than precedessor models, being only about a foot high in some cases," Fenn explained.

They reduce to a considerable extent the cutting and patching and other construction work formerly required to "fur in" built-in systems under exterior windows, thus minimizing installation work, it was stated.

The new enclosures serve as their own furring and need only a coat of paint to match room decor. Some of the modular "building block" units—available in a variety of styles—can even double as built-in furniture such as bookcases.

They are available both in floor-mounted units and in models suspended from the wall which can be installed in older buildings without moving electrical service plugs and baseboards.

Completely smooth, non-louvered front panels painted to blend harmoniously with room decor assure a clean appearance.

Radical improvement in design have increased substantially the efficiency of the new room outlets for Carrier's Conduit Weathermaster System, Fenn said.

Nozzles Redesigned

"Discharge nozzles within the units have been scientifically redesigned to provide greater air circulation but with less fan horsepower and at lower operating cost," the announcement said. "These nozzles discharge primary air from the central air conditioning system and induce room air over heating and cooling coils in the unit.

"The nozzles can also be easily cleaned. Made of polyethylene, they need only to be flexed to loosen any film or dust which might form in the orifices. Assurance of continued high efficiency with a minimum of maintenance is provided by a non-corrosive screen which protects the cooling or heating coil and other interior parts from deposits of dust and lint.

"Design of the unit provides for extremely quiet operation. A new sound attenuating chamber, completely lined with absorbent material, and non-metallic nozzles both serve as sound inhibitors.

"Rugged discharge grille sections made of high-impact polystyrene offer flexibility of air distribution. They may be placed in any of four positions.

Compensates for Load Variations

"The Weathermaster unit compensates automatically for varying load conditions such as solar heat, lights, and people, without variance of such other comfort factors as ventilation, air movement, humidity, and sound levels."

Any of three different methods for controlling individual room units—pneumatic, self-contained, or manual—is available.

In addition, each unit may be equipped with an auxiliary device to permit room occupants to shut off the air supply completely without affecting other units on the same circuit. This feature is particularly advantageous for certain applications such as hotels, Fenn said.

"The Conduit Weathermaster System was the first ever developed to eliminate bulky ductwork and also do away with fans, filters, and moisture condensation in the conditioned space," it was stated.

Weathermaster room units are located under windows around the periphery of the building and are installed to handle all exterior rooms. The units require no window openings nor is the building wall pierced at any point.

HM THE ONLY Matched

COOLING TOWERS and CONDENSERS

The Halstead & Mitchell Cooling Towers you select are *matched* by design to work with the famous Halstead & Mitchell water-cooled Condensers. You need no longer buy a high-efficiency cooling tower to work with a low-efficiency condenser (or *vice-versa*) . . . a long-life cooling tower to work with a short-life condenser (or *vice-versa*).

Remember that every cooling tower you sell is planned to work with a water-cooled condenser—then you'll see why America's leading manufacturers of air-conditioning and refrigeration equipment have swung to Halstead & Mitchell for their original equipment needs in both these components.

With cleanability you'll sell more. Why sell less?

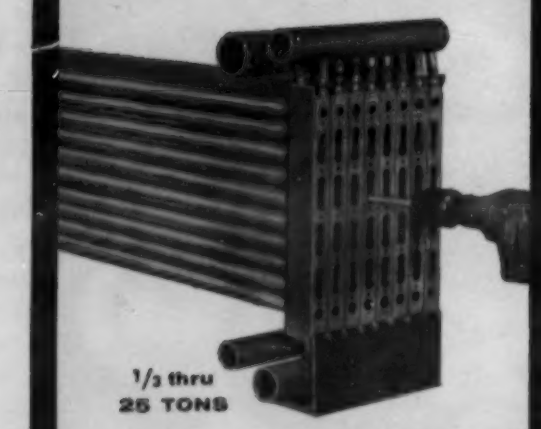
20-Year Guarantee!

on the wetted deck surface against rotting or fungus attack

Only Halstead & Mitchell pressure-creosoting can provide a *guarantee* against immediate attack by fungus and marine parasites . . . or chemical deterioration from acids in water.

Added to this H&M exclusive are other major advantages. There's ultra-high efficiency in the gravity-type water distributing pan which eliminates extra pumping head required on spray type towers . . . and cuts down on water losses due to "atomizing" of water. And there's extra-long life in stainless steel fans . . . and sheet steel cabinets hydraulically painted with vinsynite, vinyl zinc and chlorinated rubber.

2 thru 120 TONS



1/3 thru 25 TONS

Lifetime Cleanability

The *mechanical* cleaning of H&M double-tube, counter-flow condensers means the simplest, least dangerous method of restoring new unit efficiency. Whether removing a heavy coating of sludge and scale, or a thin insulating film on the inner walls of the copper tubing, the mechanical cleaning tool restores heat transfer efficiency in a matter of minutes. The result is lowered discharge pressures . . . more heat carried off by cooling water . . . lower bills. *Only* the impurities are removed . . . the thickness of the copper wall remains intact, and the condenser gives extra years of peak service.

At Leading Heating and Refrigeration Wholesalers EVERYWHERE

Write for Detailed Specifications

HM Halstead & Mitchell

BESSEMER BUILDING • PITTSBURGH 22, PA.

For more information about products advertised on this page use Information Center, page 26.

EXPERIENCE

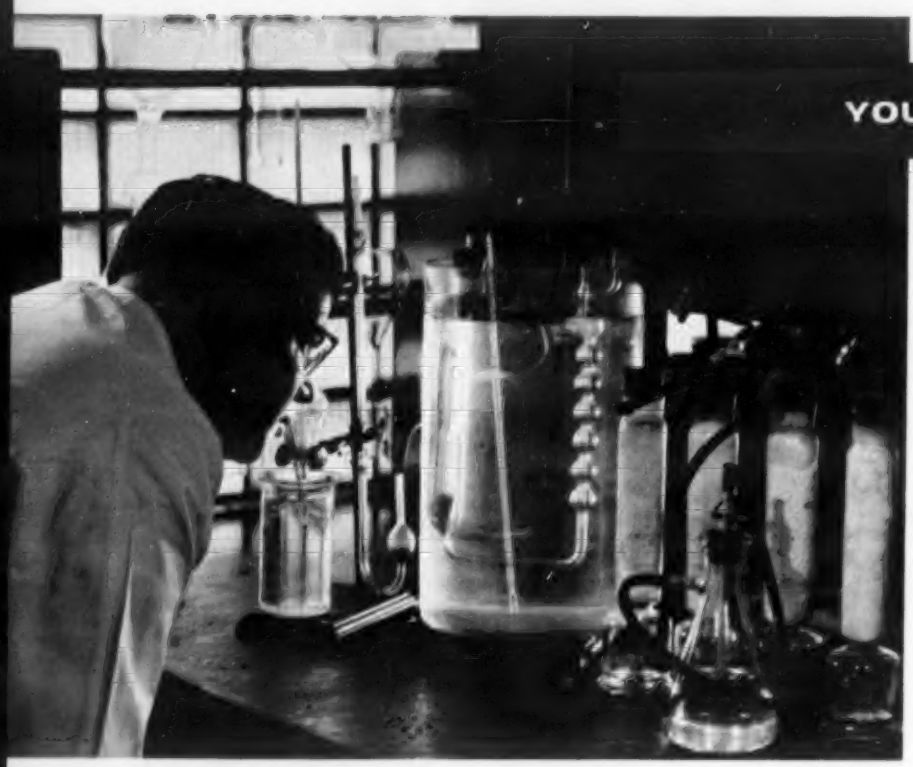
has no competitors

DU PONT FREON® REFRIGERANTS

25 years of
growth and service
in the air conditioning
and refrigeration
industry

25 YEARS OF "FREON" REFRIGERANTS

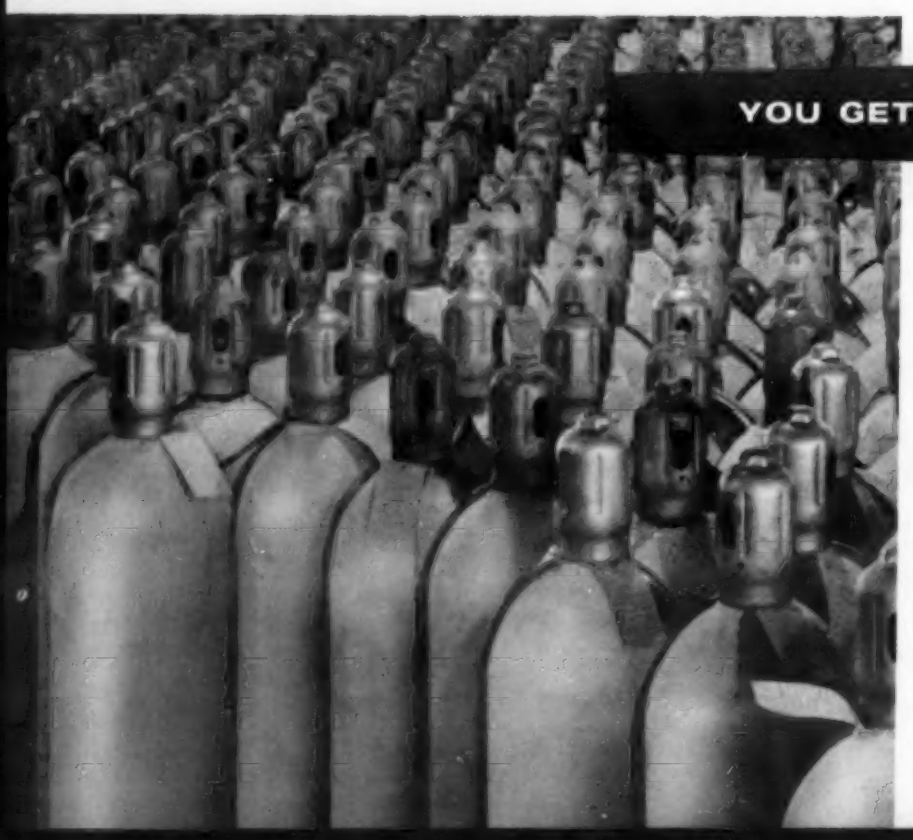
Here's why DU PONT's is vital to your air conditioning



YOU GET SERVICE

Du Pont's record of service has been built over 25 years. Since the introduction of "Freon", Du Pont has provided thermodynamic tables and other engineering data on the properties of "Freon" refrigerants which have been invaluable to designers of refrigerating equipment.

Today, when you buy "Freon", you're not only getting the best refrigerants, but the services of refrigeration specialists as well; laboratory specialists, trained sales engineers and marketing experts who are intimately acquainted with the problems of the refrigeration and air conditioning industry. A letter or phone call can put these men to work for you.



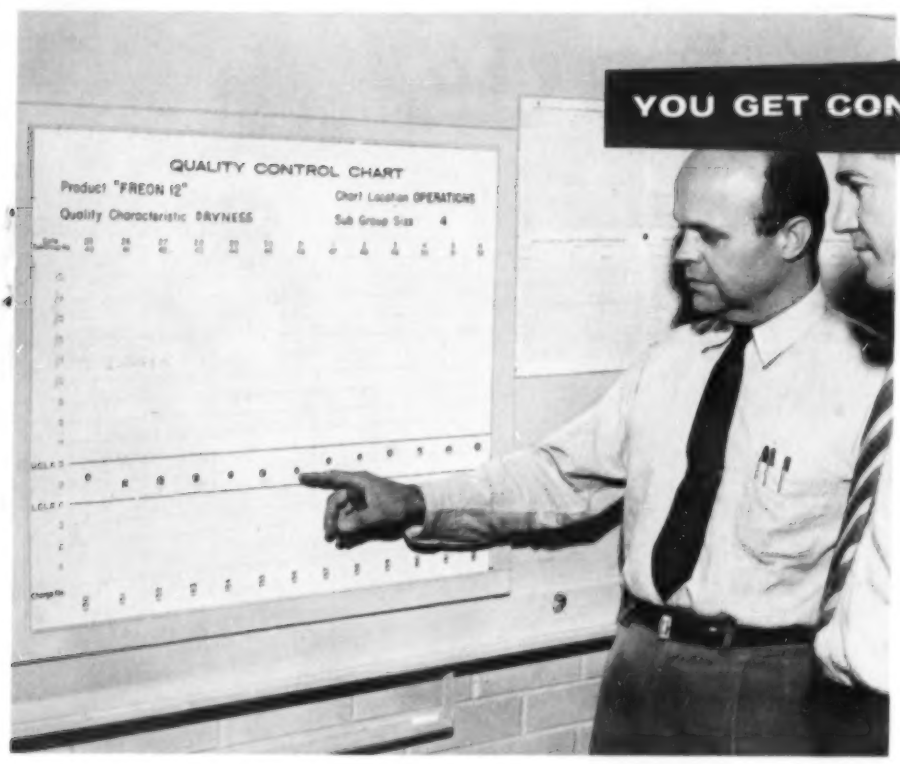
YOU GET A COMPLETE LINE

Today, as over the past 25 years, Du Pont research is at work developing new refrigerants to meet the needs of the air conditioning and refrigeration industry. Now, you can specify a "Freon" refrigerant for any type of installation. Reciprocating, centrifugal or rotary compressors; household, commercial or industrial applications—there's a "Freon" refrigerant for any air conditioning or refrigerating job.

"Freon-11".....**Boiling point 74.8°F.**
"Freon-12".....**Boiling point -21.6°F.**
"Freon-22".....**Boiling point -41.4°F.**
"Freon-113".....**Boiling point 117.6°F.**
"Freon-114".....**Boiling point 38.4°F.**

Be sure to ask your wholesaler for Du Pont "Freon" refrigerants.

quarter century of experience and refrigeration business



YOU GET CONSISTENT HIGH QUALITY

For 25 years Du Pont has made "Freon" refrigerants to the highest quality standards. Today, when you use "Freon" you can be sure it will not give you any trouble from acids or moisture. Du Pont's method of quality control assures that each shipment is *better than the published standards.* Check these refrigerant factors:

1. **Freedom from moisture . . . less than 10 p.p.m.**
2. **Narrow boiling-point range.**
3. **Less than 1.5% noncondensable gases.**
4. **Complete freedom from acids.**
5. **Freedom from high- and low-boiling material.**
6. **Nonflammable, nonexplosive and virtually nontoxic.**

For year after year of trouble-free performance, use Du Pont "Freon" refrigerants.

THE STORY OF "FREON"

During the late 1920's the shortcomings of refrigerants then in use became more and more serious. These refrigerants were difficult to handle, irritating, flammable or toxic. Scientists then set out to find a better refrigerant.

In 1930 tests on a chemical group of fluorinated hydrocarbons showed that they had all the desired properties of an ideal refrigerant. Since 1931, when they were offered for sale as "Freon"* refrigerants, they have played a major part in the growth of the air conditioning and refrigeration industry. Without "Freon", air conditioning could not have achieved the acceptance it has today.

Reserve your free copy of the complete "Story of 'Freon'," a book commemorating the first 25 years of Du Pont "Freon" refrigerants. Mail the coupon or write to E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

1931 — Experience has no competitors — 1956

1931 KINETIC 1956

25 YEARS OF

"FREON"

SAFE REFRIGERANTS

* "Freon" is Du Pont's registered trademark for its fluorinated hydrocarbon refrigerants

DU PONT

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
2420 Nemours Building, Wilmington 98, Delaware

Please reserve for me a copy of the new book "The Story of 'Freon'."

*Name*_____ *Position*_____

*Company*_____

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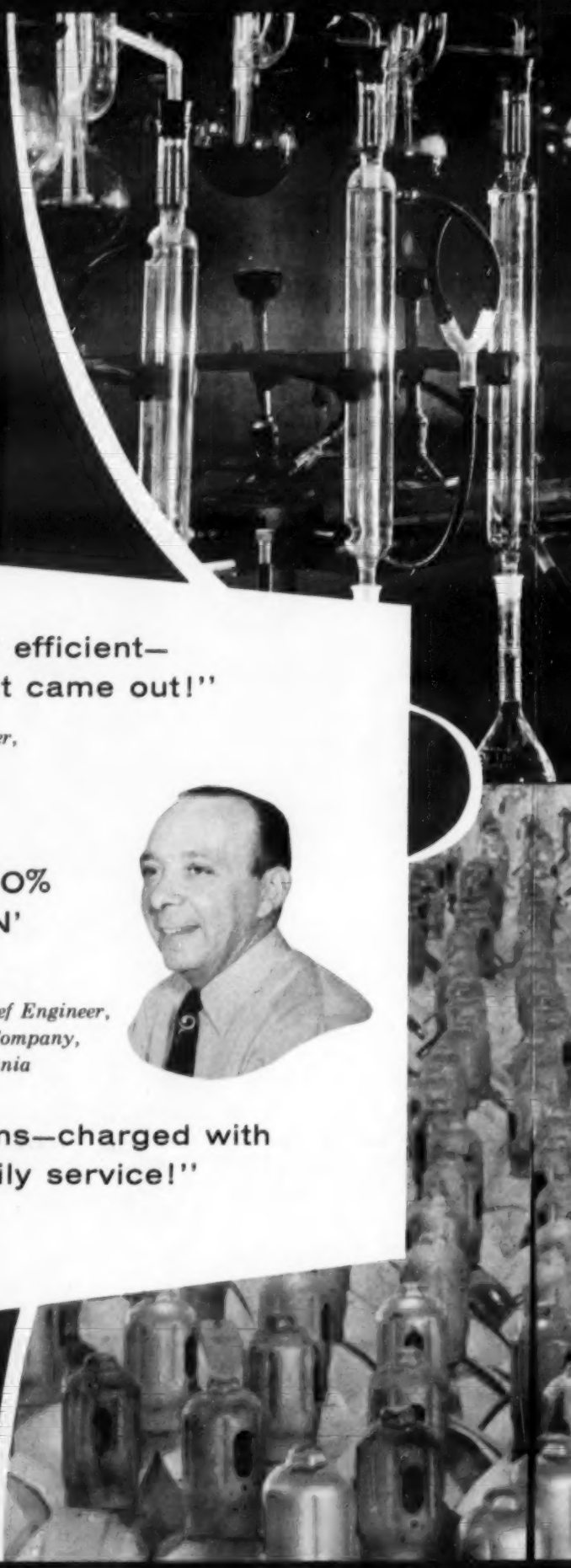
*City*_____ *State*_____

Let these long-time users tell you why you should *always ask for* "FREON"



"'FREON' is 100% safe and efficient—we've used it ever since it came out!"

Says Mr. Martin Buschman, Service Manager,
Arundel Ice Cream Company, Inc.,
Baltimore, Maryland

"20 years of use have made me 100% satisfied with the quality of 'FREON' refrigerants!"

Says Morris Silver, Chief Engineer,
Republic Air Conditioning Company,
Philadelphia, Pennsylvania

"18 years ago I put in systems—charged with 'FREON'—that are still in daily service!"

Says Mr. Karl Becht,
Hub Refrigeration Service Company,
Bronx, New York

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

EXPERIENCE HAS NO COMPETITORS

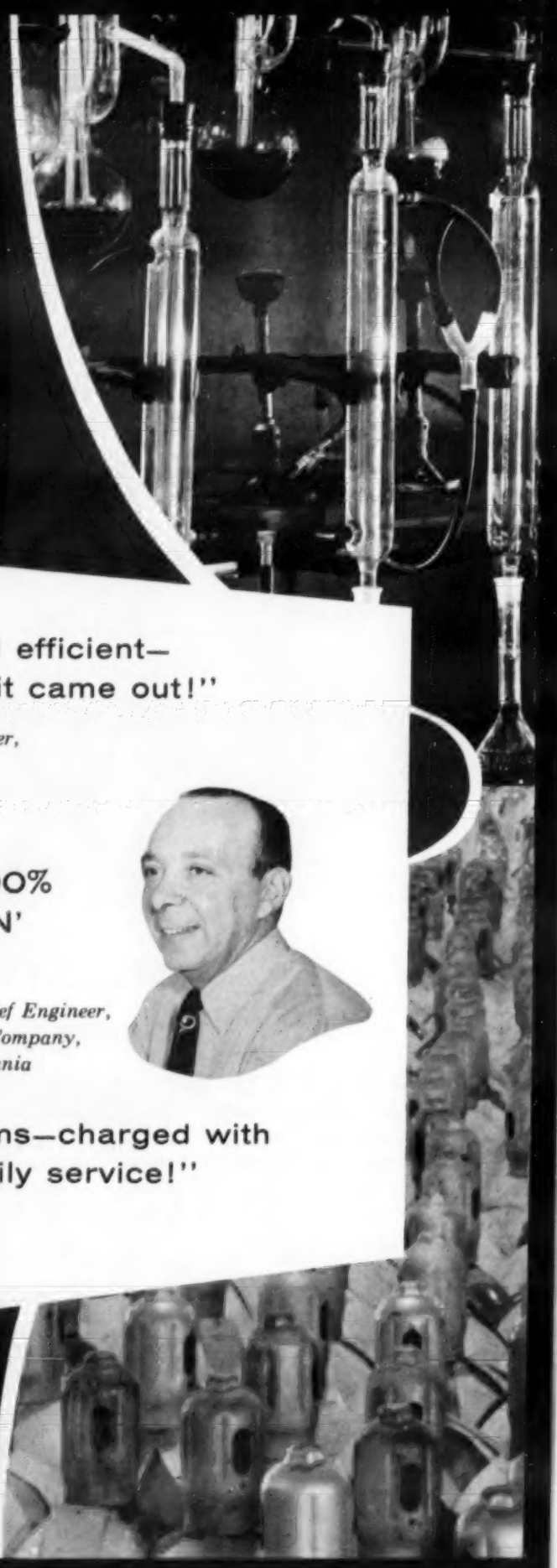
EXPERIENCE

has no competitors

DU PONT FREON® REFRIGERANTS

25 years of growth and service in the air conditioning and refrigeration industry

Let these long-time users tell you why you should *always ask for* "FREON"



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DU PONT

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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

EXPERIENCE HAS NO COMPETITORS

SALESMAN uses working model of H-P Products' conversion gas burner to explain product features to prospect.

Working Model Shows Gas Conversion Burner Features to Prospects

LOUISVILLE, Ohio — Explaining operation, safety, and other features of its H-P conversion gas burner is done more adequately with a working model than with words, the H-P Products, Inc. here, believes, so it has developed a self-contained, quarter-scale, live-fire model for dealers' salesmen's use.

Furnished with standard controls which the prospect can work himself, weighing only 40 lbs. for easy transportation, requiring no electrical connections, the model illustrates the control-simplicity, instant response, super-quiet operation, and freedom from re-cycling troubles of the unit, H-P says.

Measuring 7½ in. by 22¼ in. by 16½ in., with a sheet metal protective cover, the model burns bottled gas from a replaceable tank. It has a built-in self-generating electrical system. When in operation the salesman can point out the venturi action on base refractories directing an airstream past the pilot for relatively cool functioning, the manufacturer stated.

When the fuel is shut off, the prospect sees how the "dutch oven" ceramic design stabilizes heat in the firebox and chimney to insure constant draft and efficient combustion from the beginning of the heating cycle.

Named "The Clincher," the demonstration model is finished in the same colors as full size units. It is being made available to dealers as part of the company's new promotion plan, H-P said.

Selling 'Do-It-Yourself' Installations Proves Profitable Move for Small Heating Business

NEW YORK CITY—Properly managed, a small heating business can be profitable for the merchandising-minded operator, especially if he cashes in on the "do-it-yourself" fad and establishes working contacts with lumberyards and hardware dealers.

The National Warm Air Heating & Air Conditioning Association got some pointers on such an operation at its 42nd annual meeting here from H. E. Owens, whose firm, H. E. Owens & Co., is located in East St. Louis, Ill.

With four employes, the firm is geared to install 100 furnaces a year and clean 265, Owens said.

Average sale on oil-burning equipment last year, he explained, was $953.33 per unit for an average net profit of $217.32 each, while gas equipment sales averaged $826.67 with a net of $183.24 apiece. In addition to the profit figures, a 10% sales commission is deducted, Owens pointed out, resulting in a 33⅓% profit.

But wanting to increase sales of furnaces without increasing payroll and overhead, Owens explored the "do-it-yourself" market and found it profitable, he said.

On oil average sale under the "do-it-yourself" basis was $583.93 with a net of $108.58; on gas, $468.75 with a net of $131.96, he revealed.

How are these "do-it-yourself" installations handled?

"A man brings us his blueprint," Owens explained. "We figure the job. We quote him a price. If he buys it, we then prepare complete working drawings. We give him a blueprint with all of the lay-out on it, marked and lettered A, B, C, D.

"We then gather together all the materials, and we mark them accordingly. Each piece is lettered. It isn't a big job, it's a quick one. All that man needs to install his own furnace is ambition enough to tackle it, and to be able to read his abc's. He can put it in.

"Now, gentlemen, these have been the nicest jobs. No problems, no complaints, and rarely any service problems," Owens emphasized. "Because when we sell such a job, the last item on our invoice is 'start-up-service, $15.'

"All through our instructions we tell them, '. . . set your furnace, run your ductwork, connect your wiring and your plumbing, get oil in your tank, but don't throw the switch. Call us.'

"We send a man out to check that job thoroughly. We start it up. We adjust it, we balance it. If there are any minor little corrections to do, we do that. If it's major, we tell the man 'you'll have to do it—we'll come back.'

"We have no problems with these jobs, gentlemen, because everyone is proud of his own work," Owens said.

On a similar basis Owens has been successfully selling "do-it-yourself" installations through lumberyards and hardware stores. The former especially, he says, usually have the first contact with the person planning to build his own home.

The installation is "pre-packaged" on sales of this type just as with sales directly to the consumer.

Owens revealed that sales through lumberyards last year averaged eight units apiece. His average sale on this operation was $501.10 per unit with an average net profit of $81.93.

Other points made by Owens in his discussion was that a sheet metal shop is a "necessary evil"; a full-time draftsman makes estimates and lays out jobs for prospects; careful heat loss calculations and proper sizing of jobs usually result in smaller capacity furnaces being recommended, "and if you don't get the contract at that time you've made it awful rough on the man following you."

Nu-Way Completes $100,000 Building

ROCK ISLAND, Ill.—The Nu-Way Corp., manufacturer of oil burners, has recently completed a new plant that will provide a 40% floor-space increase, it was announced by Wm. F. Klockau, president.

Located in Milan, Ill., the new building was erected and equipped at a cost "in excess of $100,000," including the 7¾ acre site. It will add 16,000 sq. ft., of which half will house manufacturing operations. The other half will be devoted to warehouse space.

"It is expected that the addition will permit a substantial increase in production and facilitate more intense quality control," Klockau said.

Janitrol Names John Sales Representative

COLUMBUS, Ohio—Appointment of Richard H. John as sales representative for the Janitrol Heating and Air Conditioning Div. has been announced here by H. C. Gurney, Janitrol sales manager.

Gibson Div. Names Clarke, Kendrick To Sales Posts

GREENVILLE, Mich.—John D. Kendrick and Robert R. Clarke have been appointed regional sales managers for the central heating and air conditioning division of Gibson Refrigerator Co., it was announced by Earl Palmer, manager of the division.

J. D. Kendrick

R. R. Clarke

Kendrick will make his headquarters at New Orleans and will cover the Gulf area including Louisiana, Mississippi, Alabama, Georgia, and Florida.

Clarke will service dealers in Texas, Oklahoma, and New Mexico.

Increase COOLING TOWER EFFICIENCY With ASPIR-JET

Aspir-Jet, the new spray nozzle, increases efficiency of cooling towers by increasing water break-up and improving water distribution. This is accomplished by the Aspir-Jet unique design which atomizes the water with as little as one-half pound nozzle pressure. Formed of butyrate plastic, Aspir-Jets last longer because they do not corrode. Thousands already in use are giving better cooling even with lower than normal pressures.

* Available through Refrigeration and Air Conditioning Wholesalers.

Manufacturers & Refrigeration Wholesalers: If you are not now using or stocking this astounding new product, wire or write

THERMAL AGENCY
National Sales Agents
1515 DALLAS • HOUSTON, TEXAS

FAN MOTORS NEVER BURN OUT

Model SU100L actual size

when protected with

MIGHTY MITE MOTOR PROTECTORS

MECHANICAL INDUSTRIES PRODUCTION COMPANY
223 ASH STREET • AKRON, OHIO

New compactness in air-cooled AIR CONDITIONER design!

Smallest air-cooled, self-contained 5-ton central type unit made.

5 natural wood-grain finishes available on all free-standing models.

Completely automatic, thermostat controlled, air-cooled condenser. (Water-cooled available on 5-ton).

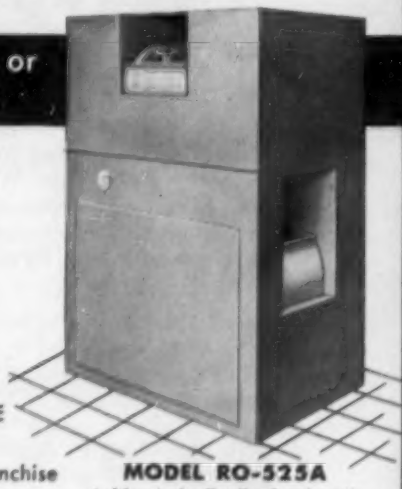
MODEL RO-575W
(with air distribution head)

MODEL NO.	NOMINAL CAPACITY	TOTAL COOL. B.T.U.	COOLING C.F.M.	OUTSIDE DIM.
FL-2	2 Ton	24,000	900 @ .3 S.P.	30Wx21Dx43H
RO-26	2 Ton	24,000	1000 @ .3 S.P.	30Wx21Dx34H
RO-31	3 Ton	36,000	1200 @ .2 S.P.	30Wx23Dx38H
RO-31 H P	3 Ton	37,700	1400 @ .3 S.P.	30Wx25Dx40H
RO-525 A	5 Ton	65,500	1800-2400 @ .3 S.P.	40Wx26Dx57H
RO-575 W	5 Ton	69,500	1800-2400 @ .3 S.P.	40Wx26Dx57H

Thermostat has 3 positions: Continuous – Automatic, Fan & Compressor – OFF.

Complete air conditioning for entire home — or equivalent commercial or office area — at the lowest cost in smallest space! GENERAL AIR CONDITIONERS deliver 2, 3 or 5 tons of cooling. All models operate on standard outlet (220 V, single and 3 phase except 2-ton — single phase only).

Attic, roof, outside, or free-standing units



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Offices and warehouses:
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WRITE today for details. Franchise dealerships available.

MODEL RO-525A
(without air distribution head)

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Los Angeles 23, California

FIVE YEAR GUARANTEE — easy payment plan

What's Needed for Profit In '56

Commercial Distributor Offers Some Concrete Ideas for Raising Profits

ATLANTIC CITY, N. J.—If the commercial refrigeration distributor is to increase his net profits next year, he is going to have to expand his sales force and provide it with better training, George F. Wiedemer, retiring president of the National Commercial Refrigerator Sales Association, declared recently.

Speaking at the ninth annual NCRSA convention here, he outlined the present status of the distributor and indicated what the distributor must do to assure his continued success.

"During this past year, many things have happened to our industry," he asserted. "We have been subjected to rising operational costs, increased parts costs, heavier insurance requirements, and in general a higher total cost of operating a business.

Competition Keener Than Ever Before

"We have had a hard time impressing upon possible candidates for selling positions in our organizations that our industry can pay as well as others. Consequently we have, in many cases, had a fast turnover of salesmen, to the point where many of our dealers have ceased to attempt to hire new men and have been satisfied to plug along with their present personnel.

"We have seen competition rise to a degree keener than ever before, consequently more volume has been available, and the better dealers have been getting this business.

"Increased volume definitely has been ours, as our recent NCRSA poll of members has indicated. But along with this increase have been other alarming signs—the cut price—the lower net profit.

"The chain accounts, the wholesale grocery accounts, and the so-called big independent buyers have felt the competitive pulse and too often our drive for this business has compelled us to lower our gross profit, to the danger point.

"These groups practically know our costs. Too many of our dealers around the country have this year told me that their volume was up and their net profit down, or at best, equal to last year.

"We have had a wonderful year of business and profits—but were they what they could have been?

"What about the coming year? Where are we headed?

"It is reasonable to believe we are in for increased labor costs this coming spring. It also is apparent from all statistics that 1956 CAN be the biggest year ever, for the refrigeration industry.

"Whether we take advantage of these facts and prepare for them can mean the difference between increased net profit and a decline in volume and net profits. We must be prepared to meet this challenge.

"It is essential that we increase our sales departments. If we were asked to invest in some sure thing we would grab at the chance. Well, the sure thing is to have the salesmen available to do the job. This is an investment for the future.

"And these men will have to be educated. More time must be spent by us as owners and sales managers, and by our respective manufacturers, to get these men prepared. Each of us needs young blood continuously coming along to take up the slack.

"We must keep after the manufacturers for help in establishing sales schools. They must realize that 60% of their volume is dependent on the success of the distributor.

Cites University's Food Service Clinic

"Michigan State university, with the cooperation of the food service equipment industry, during the past two years, has presented a two-week course in food cooking equipment. This has worked wonders, and comprises a selling course on all of the equipment used in the cooking field as well as some refrigerated equipment used in this field. Men from equipment houses all over the country attend these selling clinics.

"This type of education is good for the older salesman who knows it all, as well as for the new and young beginner. Maybe eventually our industry can have something of this type. It is worth looking into.

"We must gear our service and installation departments to handle this expected increase so that we can satisfy all our customers. New and improved methods of handling and storing equipment can be employed to combat the rising labor costs. Proper office systems and records can keep us abreast of what is happening in our business, month by month.

"The need for new and better products for us to sell is apparent. Our customer today is much smarter than he was years ago. With all the sales media available to him he is aware of all the engineering and sales features of our products. He is constantly looking for new ways and newer equipment to do his job and to increase his sales and net earnings.

"We should be prepared to offer this service and equipment. I feel that we have the manufacturers behind us, with the ability to get these products in our hands to sell.

Suggests Ways To Diversify Lines

"There are many dealers who need diversification of selling equipment. The food field has presented to us many new items to sell, thus insuring a rise in volume from this source.

"There are drink dispensing systems, with the subsequent

(Concluded on next page)

Now, you can handle any drying job if you stock just 4 Ansul Dryers and 8 Fittings

There isn't a drying job going that you can't handle with the Ansul line. What's more, you automatically *cut your dollar investment in truck stock* when you standardize on this advanced line. Equally important, you save valuable time by eliminating trips to pick up parts.

Once one of the 8 Ansul T-Connectors is permanently placed in the liquid line, you can install *any one* of the 4 Ansul T-Flo Dryer Cartridges (see above). These twelve parts give you *32 possible installation combinations*. The T-Connectors are available in ¼", ⅜", ½" and ⅝" sizes for both flare and soldered installations. Here is flexibility that no other dryer line can match. For the largest installations Ansul dryers can be easily manifolded to provide unlimited drying capacity, eliminating the need for stocking outsize, infrequently used dryers.

Changing a T-Flo Dryer is the easiest thing in the world. Remember, line breaking is not necessary. Just unscrew the old dryer and replace it with the new. Hand tightening will give you a leakproof seal. And you can install the T-Flo Dryer in any position, up, down or sideways.

Ask your Ansul Wholesaler about the new DRY-EYE fitting. The window changes color to let you see if the system is wet or dry. This is the most important servicing aid ever developed by Ansul—there's nothing else like it on the market. THE ANSUL CHEMICAL COMPANY, Marinette, Wis.

ANSUL

For more information about products advertised on this page use Information Center, page 26.

Ideas for Profit--

(Concluded from preceding page)

need for more refrigeration; walk-in coolers, refrigerators for the institutions and restaurant trade; ice cubers, and food preparing machines of all sorts which can blend into our present or enlarged sales force.

"We must be more diversified for the future. We must broaden out. We must keep our ears open for news about new products. We must be air conditioning minded and have our sales force trained for this product also.

Mfr. Deserves Loyalty

"There are unfair trade practices in our industry, used by both the distributors and the manufacturers. The manufacturer deserves your loyalty in selling his products if he has given you an exclusive franchise and you owe it to him to sell his merchandise, to the best of your ability, and to render service on his equipment. This service is just as important to you as it is to the manufacturer.

"In turn, it is my humble opinion that it is the duty of the manufacturer, and the responsibility of the manufacturers' associations, to refrain from direct selling to local chains and grocery wholesalers just because in some particular city there is not ample distribution of their products.

"Mr. Manufacturer, just who is your customer—we, your distributors, or the local chain or wholesale grocery? Loyalty, like a marriage, must be on a 50/50 basis.

Mfr. Should Help Dealer With Advice

"The manufacturer also should help the dealer by advising him of good business principles, how to set up better bookkeeping systems, cost systems, and in general help to make better businessmen out of the dealers. Some of our people are new in the industry and need all the help they can possibly get.

"Mr. Manufacturer, we need and ask for your help."

Hubbell Names Milmac Sales Representative

MUNDELEIN, Ill. — Hubbell Corp. here, manufacturer of automatic back pressure regulators and solenoid valves for refrigeration and air conditioning applications, has announced the appointment of Milmac Corp. in San Francisco as its sales representative in northern California and Reno, Nev.

Milmac will carry a representative stock of Hubbell controls and accessories as well as repair parts and will provide service to the trade, Hubbell declared.

Ice Rink Freezing Time Cut In Half By Dean Products

BROOKLYN — An ice rink freezing job which formerly took 8 to 10 hours has now been reduced to only 4, according to Dean Products, Inc. here.

Using Dean "Cold Plates," heavy-duty type with flexible manifolds and quick disconnects, the firm claims each of its plates represents 48 sq. ft. of ice surface. By adding the required number of plates, any size ice rink can be made.

An ice show producer, with the problem of needing a flexible rink for various size stages or areas and the necessity of setting it up and freezing the ice within a short period, turned to Dean equipment for his solution, the company declared.

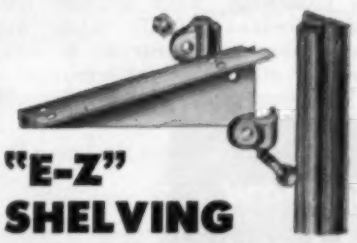
Present method in an open area was to lengthy for a traveling unit with many one-night stands, the producer decided.

His new method, according to Dean, was to lay Cold Plates, connect them, and use several "Freon-12" direct expansion Copeland "Coplematic" compressors. One trailer transports the 24 by 48-ft. complete rink and equipment. Size can be rearranged to any multiples of 4 by 12 ft., the company said.

"INDIAN" maidens performing on ice frozen by Dean "Cold Plates" which are said to reduce freezing time by half. Ice show's producer decided to use Cold Plates because of their flexibility and quick-freezing quality which enables the unit to move rapidly on its tour.

WILL SHELVING HELP YOUR SALES?

"Get the E-Z Story"



"E-Z" SHELVING

GIVES PIN-POINT ADJUSTABILITY

•

"E-Z" BRACKETS & STANDARDS *Provides These Advantages*

(1) Helps solve Uneven Floor Problem. Upper Shelves Adjust Level without shimming.

(2) Helps Solve Odd Package Sizes. Permits vertical spacing to fraction of inch.

(3) Provides rugged "back-bone" for many shelving requirements.

(4) Readily Adapted to Precision Tailored Fixtures.

NO KEYHOLES OR SLOTS

Brackets slide up and down in Standard groove and lock at any point on Standard.

HANDLES ALL NORMAL DISPLAY LOADS

Write For Free Folder

Standard Steel Works, Inc.

DEPT. AC-4, NORTH KANSAS CITY, MO.

LARKIN IS THE LINE

Of commercial and industrial refrigeration and air conditioning equipment

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Evaporative Condensers • Cooling Towers • Air Conditioning Coils • Comfort Conditioners • Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans

LARKIN COILS INC.

519 Memorial Drive, S.E. · Atlanta, Ga. · Main 3171

Ice Flaking Machine Available In Color

——KEY NO. F-140——

CHICAGO—Recently introduced by Cold Corp. of America here was a new "Chip-Freeze" automatic ice flaking machine in decorator colors, according to an announcement by the manufacturer.

Available in shocking pink, baby blue, orchid, canary yellow, mint green, and white according to the buyer's taste, the air-cooled ice-making units deliver their product always at waist level, the company declared.

In the Chip-Freeze, new ice is made at the top of the unit, the company said, so there is "no accumulation or decay of old ice." As ice is drawn from the stainless steel storage bin, new ice is then produced above.

Chip-Freeze delivers 560 lbs. of ice daily and produces ice flakes for "as little as two cents a bushel or six cents a hundred pounds," the manufacturer claims. A monostructure assembly eliminates "air lock" and makes flakes at all times.

A special rotating display apparatus atop the unit can be rented or used for advertising, the company said. Accessible from front and rear, the machine turns itself on and off, fills automatically, works with any water system. Air circulates in warm temperatures around the ventilated compressor, according to the firm's announcement.

The system is hermetically-sealed with low-pressure cut-out. Storage capacity is about 200 lbs. in the 18-gauge cold rolled steel cabinet which is 61⅝ in. high by 30 in. wide by 24 in. deep, the company stated.

Sporlan Modifies Solenoid Valves

——KEY NO. F-141——

ST. LOUIS—The Sporlan Valve Co. has modified their line of solenoid valves in order to provide greater flexibility and increased capacity in their application and operation, the manufacturer has announced.

The new line, introduced for the first time at the 9th ARI Exposition in Atlantic City, features the "Blue Seal Coil." This new, power-packed coil will be used on all models of Sporlan solenoid valves.

Some models have been modified to provide for increased capacity and universal application for either "F-12" or "F-22." All of the pilot piston-operated types have synthetic seating, instead of metal, in order to assure tighter closing.

In the interest of standardization, one mounting bracket may be used for the types 12, 43, 53, 62, 73, and 172 (Solenoid Pilot Control).

In addition, one coil—that of the type 90—may now be interchanged between the types 33, 43, 53, and 83. New style, two-piece nameplates, allow for easy interchange of coils with different voltages without ordering new nameplates or attempting to alter the old plates.

Koch Ice Cream Case Provides Flexibility

——KEY NO. F-142——

KANSAS CITY, Kan.—Koch Refrigerators, Inc. has announced a new ice cream merchandiser (models 66 and 666) which is claimed to incorporate a unique combination of features in its design.

The new cabinets are described as full-size, full-opening display cases with copyrighted "Sell-O-Vision" design.

The unit is self-contained, "with fully automatic defrosting specifically designed for ice cream handling," the company pointed out. "Defrosting is quick and perfect, with constant refrigeration between defrost periods, to protect the ice cream's texture and flavor."

Each streamlined cabinet is a compact 6-ft. unit of endless design, it was noted. The 24-in.-wide display compartment provides a 700-qt. capacity, and 12 lineal ft. of open display space.

Regarding the Sell-O-Vision design, the company said: "Engineered to encourage impulse buying, the low construction is scientifically planned to present merchandise at a particularly convenient level for the consumer."

The merchandiser may be used in either island or wall-type installations. As an island display, the front and rear are identical. The same model can be converted at the factory and equipped with a canopy so it may be used as a wall unit.

The cabinets have been styled with a "dash of color" to attract customers attention, it was reported.

Bands are available in stainless steel or colorful "Corru-Plastic" in a choice of "Ice Berg Green," "Sirloin Red," or "Frozen Gold." In addition, "Ident-O-Bands" are available in white or colored porcelain which permit the merchant to select his own design or insignia and have it fired into the porcelain, the company said.

"Either type of band can be converted in 30 seconds to allow the merchant to insert special signs for sales or promotions," it was stated.

Acme Introduces Residential Water Chiller

——KEY NO. F-143——

JACKSON, Mich.—Recently introduced by Acme Industries, Inc. here was the "Flow-Pac" residential water chiller.

Acme's "WCW" series with water-cooled condensers, the Flow-Pac is available in 1½, 3, and 5-hp. sizes with nominal heat transfer ratings of 20,000, 36,000, and 63,000 B.t.u. per hour, respectively, it was reported. The 3-hp. model measures 24 in. by 10 in. by 27 in. and is designed for either home air conditioning or small commercial-industrial applications as a low-cost packaged unit, the firm stated.

A hermetically-sealed compressor with vertical chiller unit, a new type vertical condenser, and optional cabinet are Flow-Pac features, it was said. The unit can be used with all chilled water convectors or with water coils in central systems, the manufacturer declared.

Spring-mounted, the compressor has almost the same decibel rating as a household refrigerator, the company stated. The unit chiller has full insulation, all-copper water connections, and a sealed refrigerant system. Shipped with "F-22" charge, units are ready for operation after power and piping connections, the firm avows.

Also offered is a "WCA" series, 2, 3, and 5-hp. models with an air-cooled condenser unit for remote mounting, it was reported.

Carrier 'Roomette' for '56 Has Color Styling

——KEY NO. F-144——

SYRACUSE, N. Y.—A new version of Carrier Corp.'s floor-mounted Roomette air conditioner for mobile homes has been announced by Loren Fletcher, vice president of Carrier's Allied Products Div.

The 1956 model features two-tone color styling and incorporates completely automatic operation, Fletcher said. It is available in a ¾-hp. model.

The Roomette, developed last year, occupies only a little more than 2 sq. ft. of floor space and stands just 28 in. high. It is designed to fit alongside the sofa or bed where its flat, mar-resistant top doubles as an end table or nightstand.

No ducts are used and the Roomette eliminates the need to block windows or use the special wall bracings required for conventional room air conditioners in this type of home.

All 1956 units are equipped with thermostats for automatic operation and a permanent, non-corrosive aluminum filter.

Since it draws condensing air through the bottom instead of the back as in conventional room air conditioners, a small hole is cut in the floor. The Roomette is then placed over this hole and connected to a standard 115 or 220-volt circuit. In fact it is possible for the average mobile homeowner to perform the entire installation himself, Fletcher said.

Condenser air is drawn from the cool shaded area underneath the mobile home rather than from alongside or above, thus providing maximum actual cooling output.

The reinforced metal cabinet is Bonderized and has two coats of baked enamel. The top section is covered with a specially-treated, wear-resistant material harmonizing with its two-tone color scheme.

Simple two-knob controls on the front of the unit at the top can be reached without stooping or crouching. Four airguide louvers, located directly below, are adjustable and provide a wide variety of airflow patterns.

Information Center

For *more information* on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised

(list name, page, and issue date)

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Key No. ..... Key No. .....

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City..... Zone..... State.....

Type of Business .....

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AIR CONDITIONING & REFRIGERATION NEWS

Readers Service Dept.

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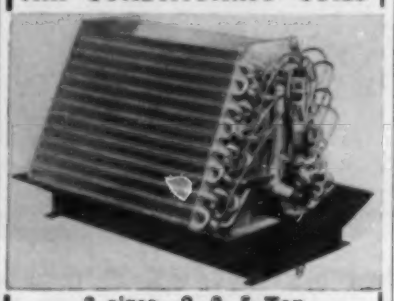
New KRACK
FURNACE BONNET
AIR CONDITIONING COILS



3 sizes—2, 3, 5 Ton
Nominal Capacities

Converts forced air furnace duct system to summer cooling. Easily adapted for new and old installations. Quality engineered, yet low in price.

Write for New Bulletin V-1155

KRACK REFRIGERATION APPLIANCES INC.

Pioneers in Refrigeration and Air Conditioning Equipment Since 1931

901 W. Lake St., Chicago 7, Ill.

Did you know
you could get
COLD PLATES
like this?

MANY SHAPES
MANY SIZES
MANY METALS

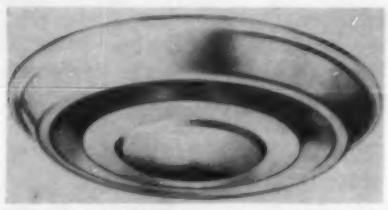
"JOB TAILORED" Dean Cold Plates are the answer to tough refrigeration problems. You can get Cylinders, U's, Angles, Tanks, etc., made *exactly* in the size you need.

WRITE FOR TECHNICAL DATA BOOK
Dept. AC

DEAN PRODUCTS, INC. STerling 9-5400

1042 DEAN STREET • BROOKLYN 38, N. Y.

For more information about products advertised on this page use Information Center, page 26.



Reduce Dimensions of Residential Diffuser

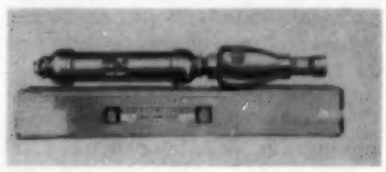
——KEY NO. F-145——

DANBURY, Conn.—Over-all dimensions are considerably reduced and contours sharpened in the recently restyled "Kno-Draft" residential ceiling air diffuser, Connor Engineering Corp. has announced.

Capacity range has been increased to more than 750 c.f.m. of air with the addition of a 10 and 12-in. diffuser.

Installation has been made simpler as the diffuser collar now fits inside round duct instead of outside as formerly. A sponge rubber gasket provides a positive air seal.

Catalog including complete engineering and selection data for both heating and cooling can be obtained from Connor Engineering Corp.



Water Conditioner Uses Nuclear Principle

——KEY NO. F-146——

JACKSONVILLE, Fla.—A new water conditioner that is claimed to operate to eliminate and prevent scale and corrosion formations in boilers and water systems without use of chemicals was recently announced by Packard Mfg. Co. here.

Applying nuclear physics principles to industrial water problems, the conditioner is designed for use in boilers, air conditioning, and refrigerating systems among other things. It imparts added energy to water solution atoms.

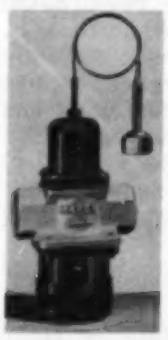
Easily installed, there is no moving part to the water conditioner which is made in sizes handling from 6.5 to 1,760 g.p.m. for connection with corresponding standard iron pipe sizes ranging from ¾ to 12 in.

All conditioners carry a 10-year warranty.

Marsh Adds Water Regulating Valve

——KEY NO. F-147——

SKOKIE, Ill.—A new pressure actuated condensing water regulating valve has been added to the line of regulating valves manufactured by the Jas. P. Marsh Corp.



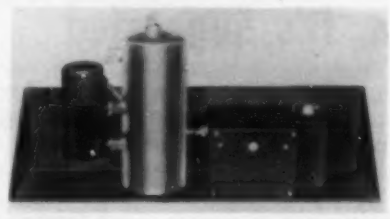
This new valve, Marsh No. 56, is designed with an exceptionally wide continuous adjustment range, 60 lbs. to 260 lbs. p.s.i. This wide range permits the use of this one valve on either "Freon-12" or "Freon-22" systems as well as all other refrigerants except ammonia.

All adjustments on this No. 56 can be made by hand, the company said. Knurled cup at the bottom of the valve permits on-the-job adjustment without wrench or screwdriver.

This new valve is small and compact, direct acting, of diaphragm construction and well balanced.

Alarm System Warns Audibly, Visually

——KEY NO. F-148——



HICKSVILLE, N. Y.—A device designed to warn both audibly and visually of loss of power, leakage of refrigerant, and undesirable temperature change in refrigerated or air conditioned spaces is being manufactured here by the Perfect-Line Mfg. Corp.

Called "Refrigotron," it is claimed to forewarn of a refrigerant leak two to five days before loss of refrigeration.

Alfred Robbins, president of the company, said Refrigotron can be adapted to all sizes and types of refrigeration and air conditioning systems from ⅙ hp. to 30 hp., and for larger sizes by special order.

The device is engineered electrically for 115, 230, or 440 volts single phase and 115 or 440-volt three phase.

One model indicates by light and gong that a refrigerant leak has occurred. Another indicates by light a loss of power, refrigerant leak, or both. It can be adapted to a multiple service signal device such as outside telephone service or local alarm system.

A third model includes the above features together with a thermostatic control with time delay apparatus which guards against undesirable temperatures.

Most models, Robbins said, are equipped with instruments which permit attachment of the Refrigotron to an answering service, such as a fire-alarm or burglar system. Thus any failure will indicate a signal both on the premises and to an answering service.

The device, he said, has been under test for the past two years and proven successful with "Freon-12," "Freon-22," and ammonia.

Content spoilage insurance, guaranteeing against losses as a result of mechanical failure of the device to sound an alarm before spoilage occurs, is available with each unit.

The Refrigotron is covered by patents and patents pending. Inventor is Joseph G. Nigro, a director of engineering for the Utility Survey Corp. of New York City and Chicago, and president of Electrosonic Protective Instrument Corp. here.

Exclusive rights for the manufacture of the Refrigotron have been awarded to Perfect-Line, Robbins declared.

Furnace Designed for 'Close Clearance' Spots

——KEY NO. F-149——

COLUMBUS, Ohio — A new "Specialine" gas-fired furnace available in 90,000 and 105,000 B.t.u. input capacities has been announced by the Armstrong Furnace Co. here recently.

The Specialine is designed for installation in close clearance applications. It is completely assembled with controls wired and mounted at the factory. The dealer need only set the unit in position, and bring in electric and gas service.

The Specialine is equipped with a single port burner that permits the use of gas varying in pressure. The company says this burner will handle any fuel variation without becoming carbonized or requiring temporary readjustment of primary air.

A stainless steel ribbon called the "Flame Master" anchors the flame to the burner port, preventing combustion roar.

The all-steel heat exchanger, with round body and wrap around single weld radiator, is a gas-tight, fume-tight unit. The stretched design provides smooth, air-foil surfaces.

Double-width blower, internal and external baffling, "Acousta-foil" cabinet liner, and built-in filter racks are other Specialine features.

Your Last Week to Get MITCHELL Inventory Protection for the 1956 Season!
LAST MONTH
DECEMBER
1956
JANUARY
NEXT MONTH
FEBRUARY
31
Act Now! GUARANTEED 30% ON 1/3 SALES PLAN
Ends January 31st!
only MITCHELL'S exclusive protection against carry-overs, mark-downs, returns and rebates...puts and keeps profit in selling room air conditioners!
WIRE... PHONE
...YOUR DISTRIBUTOR TODAY!
In ½, ¾, 1, 1½ H.P. capacities. For rooms 400 to 945 square feet.
DELUXE LINE
In ¾ and 1 H. P. capacities with Reverse Cycle or Resistance Dyna-Heat.
CUSTOM LINE
In ¾, 1, 1½ and 2 H.P. capacities. For areas from 600 to 1450 square feet.
IMPERIAL LINE

Here's How MITCHELL Protects Your Inventory!

Every dealer must stock merchandise to sell it. Year after year it has been proven that those dealers identifying themselves earliest with Mitchell room air conditioners make the greatest profits and enjoy the best volume.

For 1956, Mitchell takes the hazard out of early purchasing of room air conditioners with the revolutionary *30% on ⅓ Guaranteed Sales Plan* offering Mitchell dealers inventory protection heretofore unknown.

If you sold 100 room air conditioners in 1955, it would be safe to say that you could sell at least that many in 1956. Thus a purchase of 100 Mitchell room air conditioners gives you complete protection since under our plan you will receive a 30% rebate on your cost price for units unsold on July 27, 1956 (on up to ⅓ of the units purchased before Jan. 31, 1956)...a price reduction of approximately $60 that permits you to sell units even as low as your original cost and still show a 30% profit.

ORDER, STOCK, SELL UNDER THIS GUARANTEE!

MITCHELL

MITCHELL MANUFACTURING CO. *A Division of Cory Corporation* **Dept. AC-3, 2525 Clybourn Ave., Chicago 14, Ill.**
IN CANADA - 19 Waterman Ave., Toronto - IN MEXICO - Mitchell-American, 79 Orinoco, Gral. Anaya Mex. D.F.
Also a complete line of Mitchell Packaged Air Conditioners in both air and water cooled from 2 to 5 tons.

For more information about products advertised on this page use Information Center, page 26.

Where Does Contractor Fit In '56 Picture?

Merchandise Services Contractor Provides, It's Suggested

ATLANTIC CITY, N. J.—Mass distribution of air conditioning has hit sharply at the contractor's traditional way of doing business, but he still has the opportunity to regain his former position, believes M. T. Firestone, New York regional manager for Typhoon Air Conditioning Co.

"Let us not lose sight of the fact that mechanical refrigeration and air conditioning is your heritage," he told the Refrigeration and Air Conditioning Contractors Association at its 10th annual convention here recently.

"It was originally in your hands and doing very well, but certain manufacturers, impatient with the orderly development of our industry, and, encouraged by the mass movement of room coolers, brought the new look into our business and introduced today's mass production, mass distribution pattern," Firestone said.

"Our infant industry has now grown up into a juvenile delinquent," he remarked, somewhat parenthetically.

"With this type of thinking, it was inevitable that, unless you radically changed your methods, these volume-minded producers would replace you with fast moving, merchandise-minded operators, which they did," he told RACCA.

"While this move brought about certain abuses and compromises, the industry did go ahead at an accelerated rate, but you lost the initiative.

"However, the dreams of mass distribution through new and synthetic channels, have, in some instances, been turned into nightmares, and this," Firestone emphasized, "may very well present you with the opportunity you need to regain your former position.

"I am now primarily talking about air conditioning. Commercial and industrial refrigeration went through the same evolutionary processes which plague air conditioning today, and developed into a desirable business. The same will happen to air conditioning, when it finally emerges from its present growing pains," Firestone predicted.

"Experience shows that, to be successful, the refrigeration and air conditioning contractor must conform to a well defined pattern. This calls for a combination of sales, engineering, installation, and service, coupled with much hard work and financial horse sense.

"The way in which you organize these functions depends upon your operation. A large organization naturally requires a full complement of manpower. But I know of several small operations made up of only two principals, where one takes care of engineering and selling, and the other the installation and service, whose businesses are highly profitable.

Creative Selling Is Opposite of Bidding

"Creative selling is just the opposite of bidding. In creating a sale, you are dealing with a private prospect whom you are able to influence and motivate. In bidding on a job, you are merely appealing to a public prospect who has no interest in you other than your figures.

"In between bidding on plan and specification jobs, do some creative selling and thereby create some profitable private prospects of your own. Seek out new application opportunities, particularly in industry! Broaden your horizons," Firestone urged.

Confound Price Comparisons By Offering Services

"If you are worried about competition—and who isn't—you can confound price comparisons with your competitors by offering your prospects the many services you are capable of performing. The more services you furnish your prospects, the less competition you will have from the low overhead dealers and contractors who can neither afford, nor know how to render these services.

"Recently, you have heard a good deal about merchandisers in our business without, perhaps, knowing too much about the subject. Well, what is a merchandiser? Broadly, a merchandiser is one who has the right product, at the right price, at the right place, at the right time. So much for product.

"But what about services? Why not merchandise services as well? By all means, merchandise your experience, your facilities, your know-how, your organization, your reputation. Certainly price alone is not the answer," he said.

"Be resourceful, establish confidence! Here is an example of what three highly successful contractor-dealers have done. They have compiled booklets listing the names of all of their installations which they keep current, and, separately, listed the names of those who have bought more than one job.

Confidence Built By User Lists

"Think of the confidence they build with these user lists. On the back of these booklets, they have printed the contractors' creed which is the keynote to their success:

"'No piece of mechanical equipment—no matter how well engineered or constructed—is any better than the skill and experience of the contractor who installs it.'

"Quite a sales pitch in itself. No one will doubt the good impression these booklets create and the confidence they establish. They use them as selling tools because no good sale is ever made unless confidence is first established.

"I have emphasized many points. Now, for re-emphasis, let me sum up the substance of my talk which I most earnestly urge all of you to heed well in your daily pursuits: Adopt and apply special selling methods:

"1. Sell yourselves.

"2. Sell your stability.

"3. Sell your superior organization.

"4. Sell your superior services.

"5. Sell your superior facilities.

"6. Sell your superior know-how.

"7. Sell your superior resources, and above all:

"8. Guard your reputation!

"If you do these things effectively, with ingenuity and resourcefulness, your place in this great expanding industry of ours will be assured," Firestone said.

Brundage . . . blowers since 1919
Customers say it so much better
"For the past six years I have been dealing with various manufacturers and suppliers and I can truthfully say that I have never had such co-operation and genuine desire to give the very best of service as I have enjoyed from your company personnel."
— — —
After 36 years in the blower business, we are expected to provide the best in air handling equipment. But, it's service to every customer, large or small, that keeps us growing.
That's why we appreciate hearing things like this from our customers. It lets us know that Brundage service is up to the standards we strive for.
We'd like an opportunity to serve you in the same way.
WRITE FOR LITERATURE
PRICES ON REQUEST
RELIABLE SERVICE—
WHEN YOU NEED IT!
THE Brundage COMPANY
508 N. PARK ST. KALAMAZOO, MICH.
PHONE 2-0251

For more information about products advertised on this page use Information Center, page 26.

Plan To Standardize Methods, Codes, Principles Outlined by RSES Group

ATLANTIC CITY, N. J.—Efforts of the Standards Committee of the Refrigeration Service Engineers Society to assist in the standardization of methods, codes, and principles were outlined at the group's annual convention by J. Lawrence Hall, committee chairman.

Hall pointed out that when the American Society of Refrigerating Engineers first considered the task of the B-9 Code, the American Society of Mechanical Engineers was given the task of preparing data on many of the mechanical aspects. One of these was "Pressure Piping and Fittings," and functioned under the B-31 committee with a subcommittee #5.

Committee Results Found In ASRE B-9 Code

At that time, Hall said, he was requested to attend these meetings. The results of this committee's work may be found in the existing ASRE B-9 Code under "Pressure Piping," he noted.

It was also pointed out that the Society of Automotive Engineers, in cooperation with the ASME and other societies, sponsored an ASA standard for "Flared Fittings," under sectional committee B-16, subsection #11 of which Hall was a part. At the same time, paralleling this work was the Hydraulic Hose, Tube and Lubrication Fittings Committee working on its own standard revision.

By joint consent, both committees combined, Hall noted. Since then, he said, all meetings were and still are being held in Detroit.

No direct representation from the RSES attended these meetings in 1955, "although we receive copies of all business transactions and recommendations and are required to vote upon the same," Hall explained.

Adopted Refrigeration Flared Fittings ASA Standard

"In August of 1954, announcement was made of the adoption of a Refrigeration Flared Fittings ASA Standard," the committee report continued. "This was a great contribution to the refrigeration industry, because the newer fittings and requirements of today were not met in the old SAE or automotive type thread fittings.

"When it seemed as though completion was in sight, after two and one-half years of hard work, a new problem comes over the horizon, in a request for further study on the already-approved flare nuts, and their use relative to the double flare. This method will undoubtedly be universal on automotive types of refrigeration and air conditioning equipment.

"It was found that two flare nut sizes might not meet all requirements, and further study is now being conducted by a special sub-committee, with W. A. Hertel of the Weatherhead Co. as chairman."

There were no meetings in 1955 of the ASA-B19 committee, the report noted, "although very recently has come a new request from ARI that consideration be given to the aluminum and steel fittings."

Hall added that "this was one of the very early considerations, and was at that time ruled out as generally not applicable to the refrigeration cycle."

Refers to Article In the NEWS

Continuing, Hall referred to an editorial entitled "We Can't Build a Good Business on Dishonesty" which appeared in the March 21, 1955 issue of AIR CONDITIONING & REFRIGERATION NEWS.

(Declaring that the air conditioning industry "is practicing dishonesty in its capacity ratings," the editorial urged the industry to devise an understandable and honest method of rating equipment and live up to it.)

Noting that "so favorably was this article received that the NEWS had requests for some 30,0000 additional copies," the committee report stated: "We would like to encourage our members to re-read this article and digest its contents."

The report further pointed out that in the May 2, 1955 issue of *Life* magazine, "there appeared a striking advertisement by one of our larger room cooler manufacturers with claims of 354,708 cooling units for their ¾-hp. units.

"This unorthodox method of rating air conditioning units was conceived by multiplying the fan capacity on c.f.m. by the temperature difference, and further by the sixty minutes per hour.

"Your chairman wrote requesting information that substantiated such methods and ratings. The national Better Business Bureau, Inc. of New York also wrote for like information. I have in my files a most interesting five-page letter of explanation defending the advertising merits.

Action May Have Discouraged Methods

"I believe such action by your committee and others may have helped to discourage such 'non-standard,' unorthodox and deceiving methods, because no further evidence of this practice has been noticed to date."

RSES members were also advised that investigation has been conducted regarding the advisability of a standardization of color coding of the portable refrigerant cylinders.

"This is a major problem to the industry and to date, no conclusive opinion can be formed," the report said. "Further endeavor will be necessary."

Mueller Brass Names West to Sales Post

PORT HURON, Mich.—A. C. Dappert, vice president in charge of sales of the Mueller Brass Co., has announced the appointment of Wilbur W. West as manager of refrigeration field sales promotion in the territory east of the Rocky Mountains.

W. W. West

West will conduct group educational meetings with refrigeration and air conditioning service engineers and contractors. With the aid of operating cycle boards, and other equipment, he will demonstrate the principles of refrigerating systems, desiccant moisture removal, and proper soldering techniques.

EASIEST HERMETICS TO INSTALL AND SERVICE

KELVINATOR EXCLUSIVE!

New Plug-In Relay is both a starting relay and thermal overload protector

★ Lighter weight; more compact, simplest mounting.

★ All parts for servicing located at one point, on one side of unit.

★ Nested-Fin Condenser for best heat dissipation—highest efficiency.

★ ⅛ H.P. to ½ H.P. Hermetic Units.

For additional information write Commercial Advertising Dept., Kelvinator Division, American Motors Corp., Detroit 32, Mich.

Division of American Motors

Kelvinator

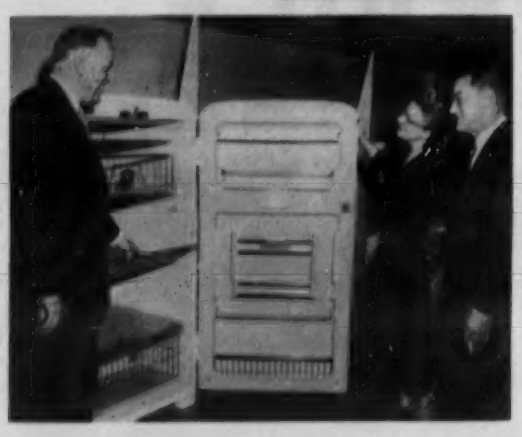
Means More for Americans

SPECIALISTS IN REFRIGERATION SINCE 1914!

What Was New
At the Winter Marts

—KEY NO. F-1410—
EXTRA-LARGE CAPACITY in both compartments is claimed for new Manitowoc two-zone refrigerator-freezer combination, with 10 plus cu. ft. in the upper part, and 12 plus cu. ft. in the lower freezer compartment. New storage door in refrigerator section houses a butter keeper and a cheese keeper. Refrigerator compartment features forced-draft refrigeration, and whole assembly operates from ⅓-hp. compressor. Rhonda Sherwood poses with the new model.

—KEY NO. F-1411—
"THINLINE" model in General Electric's 1956 line of room air conditioners is shown here as it would look in two different types of installations (left) in a casement window; (right) in a "through-the-wall" installation. The unit, which is 16½ in. deep, is available in ½, ¾, and 1-hp. sizes.



—KEY NO. F-1412—
BIG FOOD STORAGE AREA in compact area is claimed for this 18-cu. ft. Kelvinator food freezer, which H. L. Travis, general sales manager, shows off to Mr. and Mrs. Fres Cross of Pioneer Electric, Inc., Zanesville, Ohio. Travis demonstrates the drop-down shelf fronts. Other features include roll-out storage basket, and ice cream, canned items, and other door shelf arrangements.

—KEY NO. F-1413—
NEW DISPLAY FOR window air conditioners is this plastic tent, which can be used either in dealer's store, or out on the sidewalk. Normally it would be closed in the front, but is opened here to get a picture of Bill Winn of Frigidaire's air conditioning department demonstrating new model A-50-56 ½-hp. casement window air conditioner.

———KEY NO. F-1417———
FULL CONTROLS for any type of customer-desired operation through pushbutton operation is available in the new "Eldorado" line of room air conditioners introduced by Servel. Don Smith, advertising manager, shows how pushbuttons work to provide full cooling, night cooling, or ventilation.

—KEY NO. F-1414—
NEW ENTRANT in built-in refrigerator and freezer field is Amana, which has matching refrigerator and freezer units which can be installed side by side or one over the other. Each of the two units is completely independent of the other. They have "Stor-Mor" doors and many other convenience features, which Walter Wendler, Amana assistant general manager, points to.

—KEY NO. F-1415—
FIRST SHOWING of RCA-Whirlpool freezers took place in the new Whirlpool-Seeger Corp. exhibit space in the Merchandise Mart. Kathy Pennock poses with a 15-cu. ft. upright model, and a chest model, which will form part of a line which may be introduced later this Spring.

———KEY NO. F-1418———
CABINET-TYPE FREEZER which can be installed under a counter or placed free-standing like a kitchen cabinet any place in the kitchen, was introduced by General Electric. Marcia Brill demonstrates how a single drawer rolls out and affords access to two porcelain storage compartments. It has four ice trays and measures 30½ in. wide, 24¾ in. deep, and 34⅜ in. high.

———KEY NO. F-1416———
BUILT-IN REFRIGERATOR with center ice-maker evaporator was introduced by Revco, Inc. J. H. Overmyer, Revco vice president, points to arrangement which shows how the 8-cu. ft. capacity divides to provide a 26-lb. freezer compartment and 13.3 sq. ft. of shelf area. Features include door shelves, butter and cheese keeper, crisper, and removable half shelves.

WASHINGTON PROBLEMS BOTHER YOU?

Result-Producing Specialist Will Represent New Clients

If your problem is one of getting action without time-consuming government consultations and communications, I can help you. You will benefit by fast, effective action that has long produced profitable results, including cost savings up to 26% for present clients.

You have the added advantage of an established, informed representative, constantly on the alert. My qualifications for performing these functions have been developed over many years of experience in industry and the government.

New clients are offered assistance in solving problems, big or small, and at a cost that is painless. If you would like to know more, including "what clients say," send an outline of your problems in confidence to BOX A5431, Air Conditioning & Refrigeration News, Detroit 26.

CANADIANS!
HERE IS A CHANCE TO RETURN HOME!

Leading manufacturer of air conditioning and refrigeration equipment, with very active organization in Canada, wants Application Engineers and Service Engineers for work in Toronto or Montreal. Work primarily on large air conditioning installations not involving unitary type equipment. May consider paying moving expenses. Salary open.

Apply BOX A5421, Air Conditioning & Refrigeration News

Harry Alter's Newest **DEPENDABOOK** *No. 163*
Over 10,000 (count 'em!) items, shown and priced:
REFRIGERATION PARTS and Supplies
Also Electric Motors and Parts and Air Conditioning
WHOLESALE ONLY
Write for your copy and save money
The HARRY ALTER CO., Inc.
1728 S. Michigan Ave., Chicago 16, Illinois
134 Lafayette Street, New York 13, N. Y.
122 Packhouse Street, Dallas 7, Texas

down by the seashore
TATEM Surf Club
Carefree living enhanced by . . . large, cheerful guest rooms . . . private pool, ocean beach, cabana club . . . dining room and cocktail lounge.

SELECTED CLIENTELE
Write for Booklet
On the Ocean at 43rd Street **MIAMI BEACH**

For more information about products advertised on this page use Information Center, page 26.

——KEY NO. F-1419——

"TRI-LEVEL CUSTOMATIC" is name which Norge gives to new refrigerator-freezer combination. Features include complete freezer "roll-out" section, separate "ice locker," "food-freshener" plate in refrigerator compartment, and roll-out shelves. There are door shelves in both sections.

——KEY NO. F-1420——

INDICATING THE PUSHBUTTON control on the Model 200 Coolerator "Custom" room air conditioner is D. M. Berka, representative in Ohio for Lonergan Mfg. Div. of McGraw Electric Co. Other features are a night light, health filter, and flush mounting.

——KEY NO. F-1421——

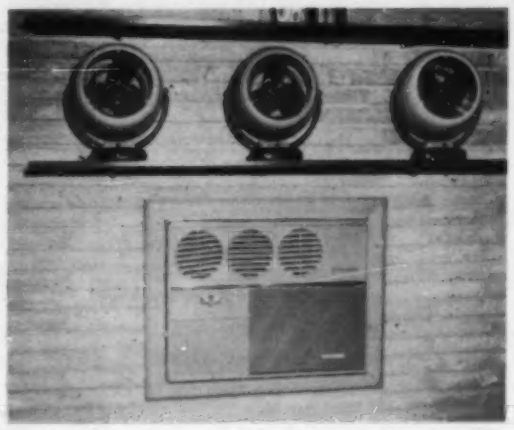
"TU-TEMP" COMBINATION refrigerator-freezer which Al Rose of Sub-Zero Freezer Co., Inc. shows off here is called "real two-temperature combination" because it makes use of two refrigeration compressors, and features individual temperature control in each compartment. Features include door shelves in each compartment, refrigerated shelves in freezer compartment, heater wire on breaker strips.

——KEY NO. F-1422——

THREE DISTINCT series of models are included in the Gibson 1956 room air conditioner line. At the top is the model GAC-771B, a ¾-hp. model with a 7.4 amp. 820 watts rating which the company says can be plugged in on any 115-volt multiple circuit. In the center is the "Customer" ¾ hp. with 360° directional discharge louver, plus ozone lamp, and two-speed blower. Deluxe ¾-hp. model at the bottom is also available in 1 hp. and 2-hp. sizes, and offers many special features.

——KEY NO. F-1423——

"THROUGH-THE-WALL" ¾-hp. model in the "Vornado" line offered by O. A. Sutton Corp. is supplied complete with mounting frame. It is also available as a portable model complete with brackets and curtain-rod type seal-off extension, and spring-mounted portable stand, making it possible to mount it in any standard double-hung window.



Pictures of products and merchandising displays appearing on this and the preceding page are from the Winter Homefurnishings Markets show held in Chicago, Jan. 9-20. More pictures of the Chicago Mart will appear in future issues of the NEWS. For further information on these products, please use key number with the Information Center blank on page 26 of this issue.

——KEY NO. F-1424——

NEW FEATURES, NEW COLOR treatment mark the 1956 Victor upright food freezers. Jerry Schmidt of Schmidt Distributing Co., St. Louis, and J. King Noel, Victor vice president, are shown with model which is finished in green and special color treatment inside. Available in 16 and 20-cu. ft. sizes, it has a separate fast-freezing compartment with insulated door.

——KEY NO. F-1425——

ROOM AIR CONDITIONER DISPLAY SETUP which shows off various types of models 1956 Westinghouse line is demonstrated by H. F. Hildreth (left), manager of refrigeration specialties division, to John Myers, vice president in charge of distribution. Top model is in the Custom line; lower left the Special line; and lower right Deluxe line.

This advertisement describes a wholesaler—who he is, what he does. It first appeared in January, 1952, and was so successful that it has been repeated each year at that time.

WHAT'S A WHOLESALER?

At the end of every production line rises the greatest single responsibility of business —the profitable distribution of a product. So important is this responsibility that men all over the world dedicate their minds, money, voices, hands, eyes, ears, noses, nerves, and sometimes their very lives to its fulfillment.

As a group these men are termed "Salesmen", "Representatives", "Agents" and "Reps". They are called other things frequently.

So intent are they on marketing their products successfully, and so dire are the consequences if they don't that they solicit the help of one of the most singularly important influences in the distribution cycle — the wholesaler.

The wholesaler has been known as a "Jobber", "Distributor", "Dealer" and smiles more often when called a wholesaler than by any other name.

He is linked to reputable manufacturers by supply, to their salesmen by merchandising, to his family by love, his employees by loyalty and to his customers by outstanding service and friendship.

He places more orders, receives more merchandise in greater variety, stocks and restocks more shelves, makes more shipments in less time, holds more confidences and credit across longer counters with a larger capital investment in a smaller area than does either his suppliers or his customers.

Every day he dispenses more information on a wider variety of products than is provided in the literature furnished him. It is taken from years of experience and is added to the knowledge of the craftsmen who are his customers.

The wholesaler can be counted among the members of leading associations, civic groups, fraternal orders, religious societies, country clubs and bowling leagues. His divergent interests compel him to be up early and out late. His favorite but rare relaxations are found at home, on vacation, with a fishing rod or behind a bird dog; at a card table and over a cup of coffee with Joe around the corner.

The wholesaler is not typically a small businessman, neither is he a tycoon; rather he is a well established, highly regarded commercial institution; sincere, practical, reliable; and on his shoulders rests the production lines of tomorrow — profitable distribution today.

WOLVERINE TUBE, 1413 Central Avenue, Detroit 9, Michigan.

WOLVERINE TUBE

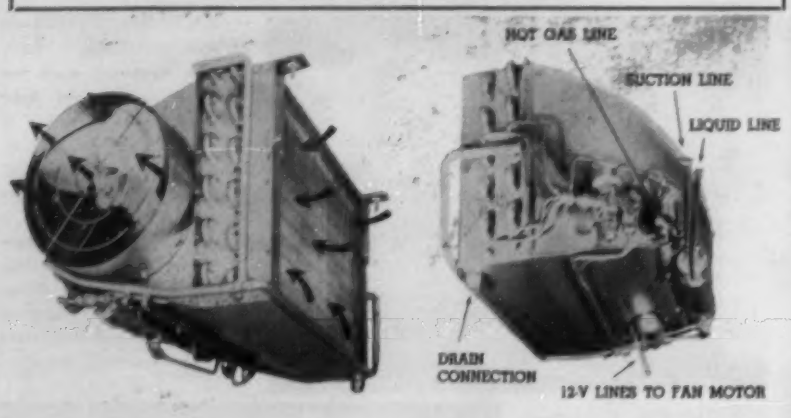
Division of Calumet & Hecla, Inc.

MANUFACTURERS OF QUALITY CONTROLLED TUBING AND EXTRUDED ALUMINUM SHAPES

PLANTS IN DETROIT, MICHIGAN, AND DECATUR, ALABAMA. SALES OFFICES IN PRINCIPAL CITIES.

EXPORT DEPARTMENT, 13 EAST 40TH STREET, NEW YORK 16, NEW YORK.

THE ONLY ROLL OF TUBE THAT ROLLS— WOLVERINE!



FRONT VIEW

REAR VIEW SHOWING COMPONENT PARTS

WEIGHING ONLY 60 lbs., this new Turbo-Jet blower evaporator gives fast pull-down and is said to present the first practical method of frost prevention in the new Kold-Trux Mark B series of continuous truck refrigeration announced by the Kold-Hold Div. of Tranter Mfg., Inc., Lansing, Mich. Shrouding of the fan and coil permit utilization of the full surface area of the coil, increasing capacity for cooling. Arrows denote direction of air movement. The fan, placed on the cold air side of the coil, moves the air more efficiently and eliminates recirculation of air around the coil and provides rapid sweep of cold air around the truck body. A temperature-sensing valve, pre-set at the factory, lets hot gas into the tube just before the frost-forming temperature is reached by the coil fins. This prevents formation of frost, balances the system and makes continuous refrigeration a reality.

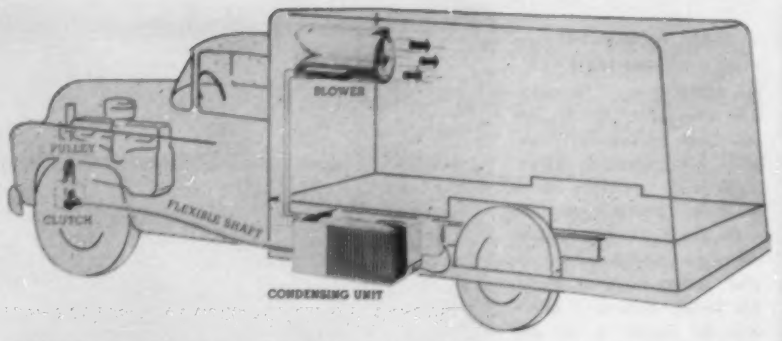


DIAGRAM above locates and identifies the major components in the new Kold-Trux Mark B series of continuous truck refrigeration that has been announced. In this system, the drive assembly, including flexible shaft, weighs only 64 lbs.; the condensing unit, including a 1-hp. electric standby motor, weighs only 286 lbs.; and the blower evaporator weighs only 60 lbs., making a total of only 410 lbs. for the entire system, installed.

Kold Hold System of Continuous Truck Refrigeration Weighs Only 410 Lbs.

LANSING, Mich.—A new system of continuous truck refrigeration, weighing only 410 lbs. and providing fast pulldown, automatic frost prevention, and ease of installation and maintenance has been announced by the Kold-Hold Div. of Tranter Mfg., Inc. here

Known as the "Kold-Trux Mark B" series, it is a complete system designed for medium and high temperature truck bodies.

New concept of design in condenser and blower evaporator units and elimination of auxiliary engines or batteries for power have cut the weight factor while increasing capacity of the system, the manufacturer claimed.

In both condenser and blower evaporator units, greater capacity is obtained with less weight by making use of the entire surface of the cooling coil and by placing the blower fans to permit more efficient movement of air, he explained.

The Mark system incorporates five innovations. In brief, they are:

1. The system is driven by a simple mechanical power train to have weight of auxiliary equipment.
2. The unusual fan and shrouding design of the condenser utilizes the entire coil surface for dissipation of heat.
3. A "Turbo-Jet" blower produces a complete cycle of air movement in seconds.
4. Condenser and blower fans are driven by a high speed generator that requires no battery. Current is produced independently of the truck electrical system.
5. The Mark B is an automatically balanced system.

Components of Drive Assembly

The drive assembly includes a crankshaft pulley assembly, an electric clutch, and a flexible drive shaft. The combined weight of these components is only 64 lbs.

The crankshaft pulley assembly replaces the truck crankshaft pulley, making the truck engine the power source for the system and eliminating the need of secondary engines.

The electric clutch, mounted beneath the cross member at the front of the truck engine, is installed in line with the truck crankshaft and is actuated by a wedge belt from the crankshaft pulley assembly. The clutch is timed to prevent shock to the truck power system when the refrigerating system is engaged.

The flexible drive shaft is attached to the clutch to transmit power from the truck to the condensing unit. The flexible shaft is of the same type as that used successfully in many other applications, but its use in the Mark B series is the first time it has been employed for truck refrigeration, the manufacturer said. To keep service to a minimum, it has been specially built about four times as strong as needed.

The crankshaft pulley, clutch, and flexible drive shaft operate continuously when the truck engine is running, providing continuous operation.

Condenser Claims Greater Capacity, Compactness

Outstanding feature of the condensing unit in the new Kold-Trux continuous refrigeration system is the Ram-Jet condenser that provides greater movement of air and dissipation of heat, yet is considerably smaller and lighter than conventional units, the manufacturer declared.

In the Kold-Trux Ram-Jet condenser, the fan is shrouded and mounted with the blades at right angles to the coil and at its forward end. In mounting, this brings the fan to the front wall of the truck body, taking advantage of the ramming of outside air into the system when the truck is in motion.

Shrouding around the fan extends the full length of the coil, narrowing as it reaches the far end of the coil, making it possible to use a smaller, lighter unit because its full capacity is used. The coil normally is mounted flush with the streetside of the truck body.

Fan on Cold Air Side

Efficiency of the condenser unit also is increased by having the fan on the cold air side of the coil. Cooler air is denser, and therefore is moved more readily, increasing circulation and adding to efficiency, the company explained.

Power for the condenser fan (and blower evaporator fan) motor is supplied by a high-speed, automotive generator that requires no battery. The generator, and the high-speed automotive-type condenser, operate from a countershaft connected to the flexible drive shaft.

An over-riding clutch permits operation of the refrigeration unit on the road without cutting in the electric standby motor. This clutch also permits operation of the unit by the standby electric motor without operating the truck engine. In this way, a smaller electric motor provides more tons of standby refrigeration, the manufacturer said.

The entire condensing unit, including standby motor, weighs 286 lbs. with a 1-hp. motor, 298 lbs. with a 1½-hp. or a 2-hp. motor, and 315 lbs. with a 3-hp. motor.

The weight difference between models is due to difference size standby motors and pulleys. The remainder of the unit remains the same. The same mounting frame accommodates all models.

This also means that the only difference between models is in standby capacity. All models have the same over-the-road capacity.

No Holes To Drill For Condensing Unit

The condensing unit is mounted to the chassis by brackets so there are no holes to drill. The unit does not extend above the chassis except for a ⅜-in strap hook that is adjustable and is rigidly hooked to the inside top of the chassis side rail.

The bottom of the unit is clamped to the bottom of the chassis with a "J" bolt around the inside bottom flange of the chassis side rail.

Standard location for the condensing unit is under the left front corner of the truck body. Being skirt mounted, it does not require that the body be "beefed up."

The condensing unit is 17⅜ in. high, 31⅞ in. long, and 25 in. wide. It is adjustable from 25 in. to 29 in. out from the chassis frame so it will match body width.

The condenser unit is mounted on its frame by two inboard bolts and two outboard bolts. The condenser unit tilts down

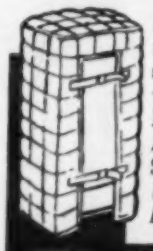
(Concluded on next page)

SUPER-FLO
FILTER-DRIER
UP TO 5 TONS
NO PRESSURE DROP
MOLDED REMCAL DRYING
FIBERGLAS DEPTH FILTERING
Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiberglas depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.
REMCO INCORPORATED ZELIENOPLE, PA.

FIELD REPRESENTATIVE FOR HOUSTON AREA -
If you are a technical graduate, 25 to 32 years of age, with experience in refrigeration and/or air conditioning, an opportunity for advancement with an outstanding and progressive company is available. After a factory training program, very interesting work awaits you calling on contractors, wholesalers and manufacturers of all types of equipment. Very liberal salary, bonus and expense allowance arrangements for an energetic sales engineer.
Write BOX A5425, Air Conditioning & Refrigeration News

SMALL MOTOR STARTERS with Built-in Overload Breakers
Send for ALLEN-BRADLEY Bulletin 600

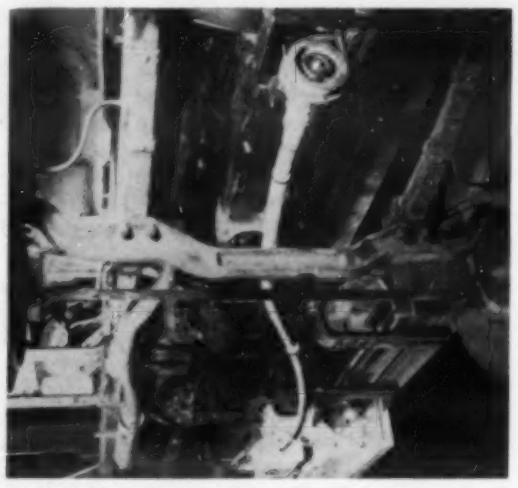
Here is a handy reference guide on manual controls for small motors. Starting switch and reliable overload protection are combined in a single compact unit. Switch cannot be held on during sustained overload. Double break, silver alloy contacts require no maintenance. Available with pilot light to indicate when motor is running.
Bulletin 600 Motor Starters offer a variety of enclosures and operators—toggle, lever, or key . . . also selector switches. Thus, the Bulletin 600 line will satisfy practically any need. Max ratings: 1 hp, 110-220 v, A-C; ¾ hp, 115-230 v, D-C.
A-B Quality
The Sign of QUALITY MOTOR CONTROL
ALLEN-BRADLEY SOLENOID MOTOR CONTROL quality
Allen-Bradley Co.
1313 S. First St., Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd., Galt, Ont.

unmarred!

Air conditioning and refrigeration units are handled safely and efficiently — go to work unmarred — with ELKAY Moving Pads and Covers, Appliance Trucks, Dollies, Straps and Casters.
Write for complete FREE CATALOG!
ELKAY PRODUCTS CO.
323 27 W. 16 St., N. Y. 11, N. Y. • WAtkins 9-1148

"A CASE OF COOL JUDGMENT"

FLO-COLD DRINKMASTER
STAINLESS STEEL CUBER — COOLER.
SOLD THRU DEALERS ONLY
WRITE
United Frigurator Engrs.
MENOMINEE, MICH.
AVAILABLE IN SIZES 4 to 10 FT.

For more information about products advertised on this page use Information Center, page 26.



AUXILIARY ENGINES are eliminated on the Kold-Trux Mark B series of continuous truck refrigeration. As shown right, a crankshaft pulley assembly transmits power from the truck engine to an electric clutch, which is connected to a flexible shaft to transmit power to the condensing unit. A view of the underside of the truck shows how the shaft connects the clutch and condensing unit. Simple clamps hold the flexible shaft in place. The core socket of the flexible shaft engages the tang of the countershaft through which power is transmitted to the compressor and generator in the condensing unit.

Truck Refrigeration Unit--

(Concluded from preceding page)

to give access to the remainder of the unit when the two outboard bolts are removed and the two inboard bolts are loosened.

Blower Evaporator Weighs 60 Lbs.

Employing the same principles as the condenser unit, the new Kold-Trux blower evaporator provides high capacity with a smaller, lighter unit. It weighs only 60 lbs. and is 19⅜ in. wide, 29½ in. long, and 16⅝ in. high.

Full use of the coil surface is made possible by shrouding of the fan. Again, the fan is placed on the cold air side of the coil. In effect, this makes it a suction fan in the evaporator assembly, drawing air through the cooling fins, and blowing the cold air toward the rear of the truck body.

The shrouding arrangement and placement of the fan on the cold air side of the coil also helps to eliminate recirculation of air around the coil. This helps to facilitate a complete sweep of air around the entire truck body, the company asserted.

Frost Prevention

Key to frost prevention is a temperature-sensing device that is set at the Kold-Hold factory to start opening at 32½° F. A control bulb is inserted among the fins, not in contact with the tubes.

A hot gas line from the compressor discharge is connected to the gas inlet.

When fin temperature heaches 32½° F., the valve begins to open. This allows hot gas to enter the coil and prevent formation of frost. When the hot gas reaches the control bulb, the heat closes the valve and refrigeration begins again.

This arrangement makes feasible continuous refrigeration without interruption for defrosting, the manufacturer declared. It permits the temperature of the coil to be held at the coldest point at which it can be operated without frosting. It also takes care of excess refrigeration generated at high speeds.

Valve Balances System To Load

In action, the valve balances the entire system to the load. For example, with a high inside body air temperature, as after a service opening, the temperature difference might be as much as 35°, i.e., 32 + 35 or 67° at which time the capacity would be 35 × 736 or 27,000 B.t.u., if the compressor were running fast enough to produce that much refrigeration under the conditions.

As the body temperature and temperature difference drop, the capacity falls off until the capacity and heat gain balance. For instance, when the body temperature dropped to 45, the difference would be 13 and the capacity would be 13 × 736 or approximately 9,600 B.t.u.

The frost prevention valve limits the work done by either the truck engine or the standby electric motor to the amount required to balance the load.

The blower evaporator normally is mounted on the ceiling in the left front corner of the truck. It is held in place on the ceiling by three stud bolts. Because of the shrouding design, there is no need for a bolt in the corner of the truck.

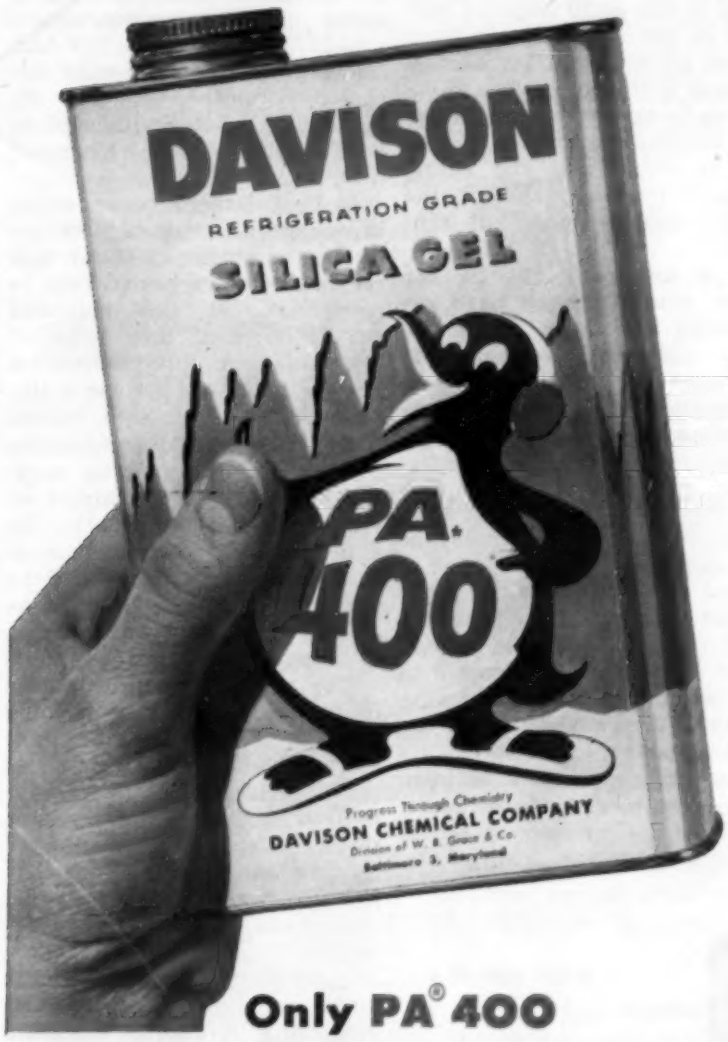
Sherer-Gillett Names J. D. Jelley Southwest Zone Sales Manager

MARSHALL, Mich.—John S. Twist, vice president in charge of sales for Sherer-Gillett Co., has announced appointment of James D. Jelley as southwest zone sales manager with headquarters in Houston, Texas.

J. D. Jelley

His territory includes Texas, Louisiana, and New Mexico.

Since his discharge from the Navy in 1946, Jelley has been engaged in selling, covering most of the products in the commercial refrigeration field. In addition, he operated his own manufacturers' agency.



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Servel

For more information about products advertised on this page use Information Center, page 26.

Refrigeration Problems
And Their Solution
By Paul Reed
For Service and Installation Engineers

Standard and Fast Trip Heater Coils, For Line-Type Motor Protectors (4)

There are several construction and design factors that affect the current at which the protector trips, and the length of time that it takes for it to trip: the electrical resistance of the metal of which the heater coil wire is made and the temperature of the wire, for its temperature affects its resistance; the gauge (diameter) of the wire, and the length of the wire in the coil; the size of the coil and its nearness to the spindle (it should be centered, so that one side of the coil is no nearer to the spindle than the other).

How well the coil and other parts of the protector are shielded or insulated from room temperature, which may vary from time to time (the standard room temperature for ratings of protectors is usually considered to be 77° F., with the starter door closed); the size of the spindle (a small spindle will heat up quicker than a larger one); the material of which the "solder" is made, and its melting point; the strength of the switch spring; and other hatters of design that are out of the control of the man in the field.

SELECTING THE RIGHT HEATER COILS

The starters are made in several ranges of horsepower sizes, with a variety of heater coil sizes and ampere ratings, from which the proper heater coil may be selected for a given horsepower and current consumption of the individual motor with which the starter is to be used.

If you receive the starter with a piece of refrigeration equipment, the manufacturer of the equipment selects the right size of heater coil to properly protect the motor on his equipment. He is so familiar with the needs of his equipment, that you can usually depend on his selection of the right size heater coil.

However, if you buy a starter separately, you must make the selection of the heater coil yourself, in accordance with the full load current rating of the motor with which it is to be used, and you must also make the proper allowance for the maximum allowable overload current of the motor. In cases in which you must make the selection of the heater coils, you may run into trouble.

First, the motor is marked to show the *full load* rating of the motor, so you must know how much overload that particular type, horsepower, and make of motor will stand.

Some starters have a list in their covers to show which of their available heater coils should be used with motors of various horsepower and voltage. Motors vary, and the starter manufacturer must be conservative in his selection, so his tendency will be to specify a heater coil having a rating low enough to be sure to protect the motor against damage.

Thus, he will probably specify a heater coil based on allowing about a 15% overload. However, many motors will stand 20, 30, or even 40% overload continuously.

If you use this starter on a motor driving a compressor whose manufacturer, with the knowledge and permission of the motor manufacturer, expects the motor to run overloaded 25% continuously, you may find that the overload protector will be continually kicking out. There is nothing wrong, except that the heater coil is too small.

On the other hand, it is dangerous to use a heater coil that is too large, for by so doing, you may give the motor inadequate protection and the motor may burn out. The remedy is to follow the instructions and specifications of the manufacturer of the motor-driven equipment.

RATINGS OF HEATER COILS

There is still another factor that adds to the difficulty. Inside the cover of the starter there is a list of the various heater coils available for that starter. This list includes ampere ratings for each of the heater coils. These ampere ratings are not, as a rule, the current values at which the overload protector will trip and open the switch. That is, they are not the "ultimate tripping values," but are the nameplate ratings of the motor, and therefore have an overload factor in them of about 15%.

Even if you knew the ultimate tripping value of these heater coils you would find it difficult to select one having exactly the right value for the the motor for which it is to be used. The manufacturer of the starter makes quite a variety of heater coils, but he cannot be expected to have one of exactly the right size for every possible motor rating.

Nor can he be expected to manufacture his heater coils to an exact rating. He must allow some tolerance in his factory production, and this may be as much as 10% below the coil rating. This is, a heater coil rated to trip at 10 amperes may blow as low as 9 amperes.

This all sounds a bit confusing, and it is true that the situation as to motor ratings, allowable maximum overloads, heater coil selection, and the actual ultimate tripping value of the heater coils is somewhat confused.

It is improving though, for motor manufacturers have established standards for maximum allowable overloads for the various frame sizes and horsepower of motors, but these standards are not all in universal use as yet.

LOCKED ROTOR CURRENTS

As previously explained, at the instant that the current is turned on to a motor, its rotor is not turning. This is called "locked rotor," and the locked rotor current may be from 3 to 5 times normal full load running current, depending upon the type of motor.

As the rotor starts to turn, this current begins to decrease, until, with the motor up to normal speed, the current is down to normal. If the heater coil is properly sized, the heavy starting current will not heat up and melt the solder soon enough to trip the overload protector, provided—that the motor does not take too long in getting up to normal speed.

In fact, if an open-type motor stalls—does not start at all—it takes the solder pot type of overload protector about 30 seconds to blow, even though the motor current through the heater coil is say, four times normal full load current.

(To Be Continued)

Characteristics of Refrigerants Discussed In 3 ASRE Papers

ATLANTIC CITY, N. J.—Condensation, boiling points, and heat transfer of refrigerants were discussed in three papers presented at one technical session of the American Society of Refrigerating Engineers when it held its 51st annual meeting here recently.

Research on heat transfer rates from heated horizontal tubes to dichlorodifluoromethane ("F-12" and "G-12") was reviewed by Prof. Merl Baker of the University of Kentucky, while Prof. Richard C. Potter and Surendra P. Patel of Kansas State college discussed condensation of "Freon-12" in a horizontal tube.

Boiling point and boiling range of three refrigerants—("G-12," "F-12," "G-11," "F-11," "G-141," and "F-22") were discussed in another paper by W. H. Decker, L. B. Smith, and A. D. Turissini of Allied Chemical & Dye Corp.

In Prof. Baker's paper, which is one of a series of progress reports on studies of heat transfer rates from a heated tube to refrigerant, it was indicated that refrigerant flow rates of low value have little influence on heat transfer but become a significant factor at high values.

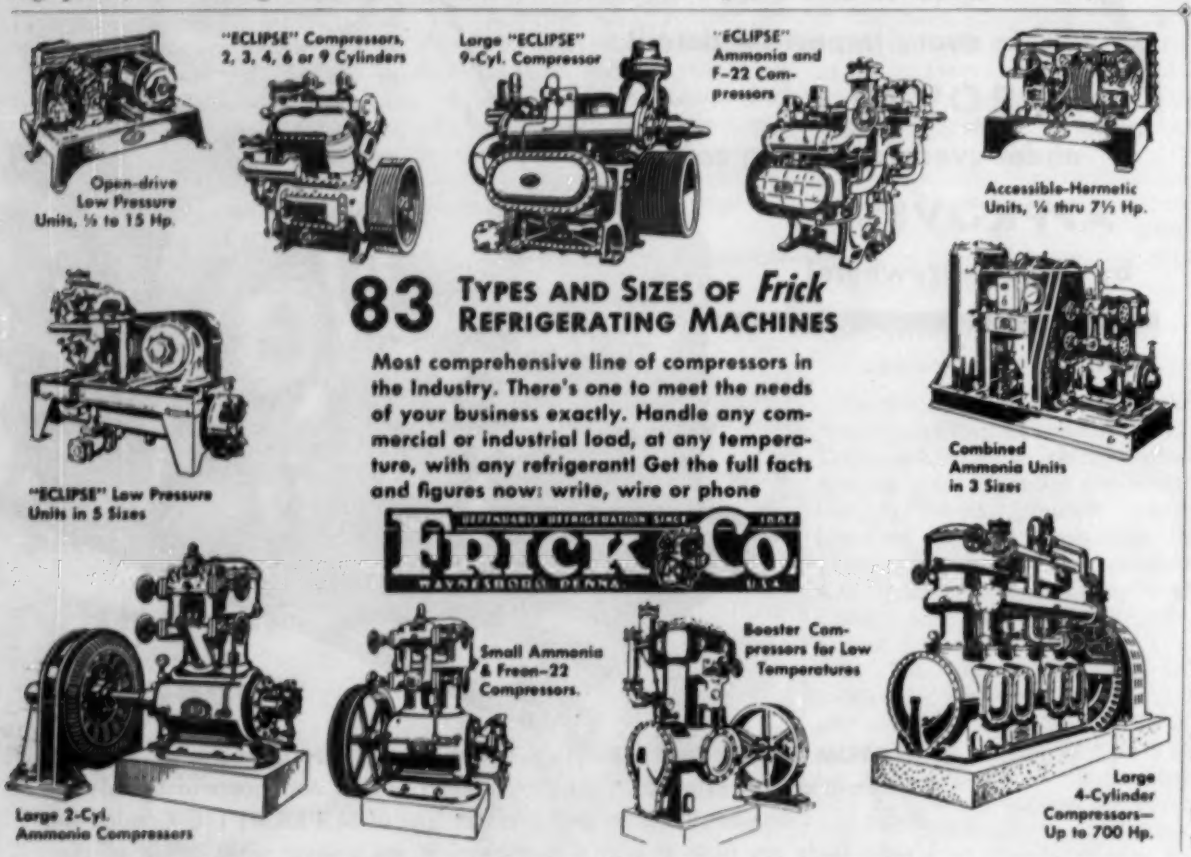
The "Freon-12" condensation studies at Kansas State, sponsored by ASRE, are aimed at gathering data to help in the design of horizontal condensers. Material developed thus far, the authors indicated, will serve as a guide, but additional research is necessary.

The paper on boiling points of refrigerants was devoted chiefly to describing a new method of measuring these points. Heart of the newly-devised method is a thermistor thermometer, the thermistor being a metallic oxide element having a high negative temperature coefficient of electrical resistance.

According to claims of the authors, the new apparatus and measuring technique eliminate "errors inherent in prior methods."

Bragg Distributors, Inc. Chartered In Wichita

TOPEKA, Kan.—Bragg Distributors, Inc., Wichita, has been granted a charter to do business as a wholesaler of heating and air conditioning units. C. W. Bragg has been named resident agent. $5,000 capitalization was authorized.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Large "ECLIPSE" 9-Cyl. Compressor
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Research Outlined on Residential Cooling Used with 'Dry' or Wet' Heat

CHICAGO—Some of the most recent technical information on the application of comfort cooling equipment to residences using warm air heating systems and forced hot water heating systems was presented at the Illinois Chapter of the American Society of Heating & Air Conditioning Engineers at the January meeting.

Speakers were Donald R. Bahnfleth and Warren S. Harris, both of the research staff of the University of Illinois.

Prof. M. K. Fahnestock, also of the University of Illinois, was meeting chairman and conducted the question and answer period that followed the meeting.

Reporting on the application of cooling equipment to the warm air heating system, Bahnfleth outlined the research conducted in the research residences during the summers of 1954 and 1955.

Results with the perimeter system using floor diffusers and the high sidewall register systems were discussed. The perimeter system was used in two houses, one with a basement and the other with a concrete slab floor.

In describing the slab installation, Bahnfleth pointed out that condensation on the slab was not noticed during any of the tests conducted throughout the entire summer.

The dewpoint temperature of the room air did not fall below the dewpoint temperature of the conditioned air in the duct system. However, this situation would not prevail in all geographical locations such as along coastal areas.

In commenting on the application of the research information to field conditions, Bahnfleth said that he had noticed that remote air-cooled condensing units are being used more extensively each season.

Tests conducted during the summers of 1953, '54, and '55 in the hot water heating research home were analyzed by Prof. Harris, who explained the adaptation of forced hot water systems to forced chilled water systems.

The problems encountered in remodeling existing heat exchangers and installing cold water returns were discussed at the meeting.

The three types of heat exchangers described were the fin and coil radiator type, with a flat type blower drawing air into the bottom and discharging it at the top; another radiator of a similar type where the air was drawn in at the top and discharged at the bottom; and the fan-coil package designed for a central location.

The performance of each of these three types of design conditions reached or exceeded was compared, with the results indicating that the centrally located fan-coil type with heat exchanger was the most economical to install and to operate.

This was, Prof. Harris said, because the use of a heat exchanger in each room using its own blower consumed more electrical power than a centrally located unit.

Room air temperatures were found to be about equal for each of the types of equipment used. However, when the capacity of the air conditioning units was close to actual cooling load on the home, the units operated more continuously and reduced the relative humidity appreciably.

Philadelphia Group Offers Course In Residential Air Conditioning

PHILADELPHIA—Manufacturers and distributors are cooperating with the Electrical Association of Philadelphia to present an eight-week course in residential air conditioning for dealers in the Delaware valley area.

For the nominal fee of $10, dealers are attending eight consecutive Wednesday night sessions in an auditorium of the Edison building, Philadelphia Electric Co. here.

First class was Jan. 11. Final session will be Feb. 29. Classes run from 8 to 10 p.m.

All phases of residential air conditioning, including heat gain calculations, selection and application, installation, and service are covered in the course.

The training course was prepared by a committee of three: H. B. Shaffer, vice president, S. S. Fretz, Jr., Inc.; William C. McMichael, manager, air conditioning department, Bryant Air Conditioning Corp.; Otto M. Kershock, district sales manager, Frigidaire Sales Corp.

E. C. Lambert is chairman of the Electrical Association's air conditioning division.

Distributors participating include Elliot-Lewis, S. S. Fretz, Jr., Inc., Peirce-Phelps, Bryant Air Conditioning Corp., Raymond Rosen, Tempco, and Frigidaire Sales Corp.

Complete outline of the training course is as follows:

Wednesday, Jan. 11

Lesson 1. Fundamentals of Air Conditioning.

1. Principles of refrigeration.
A. Terms commonly used in residential air conditioning.
2. Explanation of various types of systems.
A. Air-cooled cycle.
B. Water-cooled cycle.
C. Evaporative condenser cycle.
D. Heat pump cycle.
E. Absorption cycle.
3. Making the preliminary survey of job.

Wednesday, Jan. 18

Lesson 2. Elementary Heat Gain Calculations.

1. A.R.I. standard form.
2. B.t.u. vs. tons ratings.

Wednesday, Jan. 25

Lesson 3. Types of Residential Equipment—Selection and Application.

1. Combination unit.
A. Oil fired.
B. Gas fired.
2. Self-contained unit.
3. Remote unit.

Wednesday, Feb. 1

Lesson 4. Application and Design of Residential Equipment.

1. Noise problems.
A. Ductwork.
B. Compressor.
C. Air noise.
2. Locating and mounting equipment.
3. Determining required c.f.m.
4. Air distribution—new and old residence.
A. Temperature supply air entering room.
B. Rate of air movement in room.
C. Location of supply registers and return grilles.
D. Air pattern in room.

Wednesday, Feb. 8

Lesson 5. Installation (Part I).

1. Electrical.
A. Elementary electricity.
B. How to check size of existing electric service.
C. Wiring, minimum sizes, fuse sizes.
D. Constant fan vs. intermittent fan.
2. Water and drain piping.
A. Size water line for water-cooled units.
B. Water regulating valves.
C. Water temperatures.
D. Pressure drop in system.
E. Condensate pump.
F. Local regulations, water and sewerage.

Wednesday, Feb. 15

Lesson 6. Installation (Part II).

1. Cooling towers and evaporative condensers.
A. Centrifugal and turbine pumps.
B. Standard piping: water, drain.
C. Standard wiring.
D. Ductwork (indoor application).
2. Refrigerant piping.
A. Precautions to take during installation.
B. Moisture and evacuation systems.
C. Insulation.

Wednesday, Feb. 22

Lesson 7. Service Engineering.

1. Basic service.
A. Refrigeration service.
B. Heating service.
C. Controls—service checks.
2. Condensing mediums.
A. Water tower service and maintenance.
B. Air-cooled condenser service, maintenance.
3. The serviceman vs. the customer.

Wednesday, Feb. 29

1. Graduation.
2. Presentation of awards and diplomas.

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WILLIAMSON Waterless Wethermatic AIRefrigeration units can be added quickly and easily to any residential or store forced air heating system. Choose from plenum, duct, counterflow, suspended horizontal or console types for efficient low cost operation.

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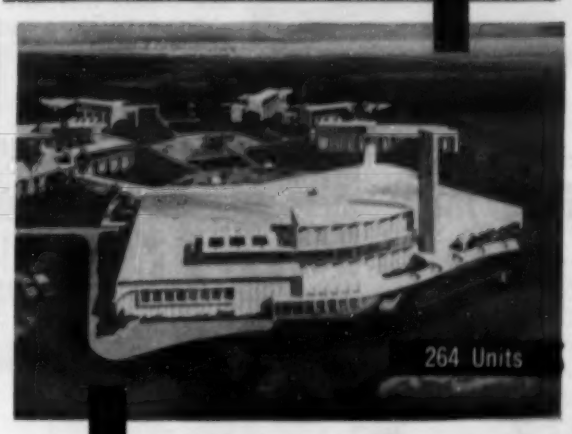
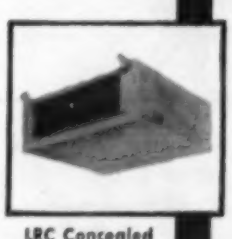


... already set for new Lucy Lutz hotel, Las Vegas. * Rendering courtesy Architect Homer Rissman

LRC Basic Unit



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Servicing Automobile Air Conditioners

BY C. DALE MERICLE

This is the third instalment describing the air conditioning system employed by American Motors Corp. in its Nash automobiles.

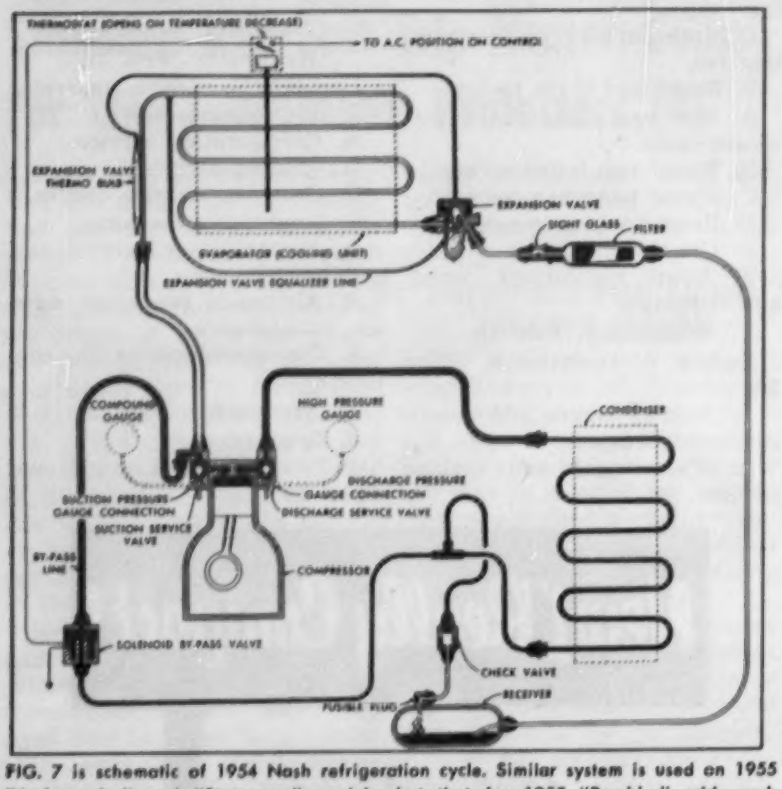

FIG. 7 is schematic of 1954 Nash refrigeration cycle. Similar system is used on 1955 "Ambassador" and "Statesman" models, but that for 1955 "Rambler" adds such features as suction-line heat exchanger and discharge line muffler.

FIG. 8 shows instrument panel air discharge grille door on 1955 "Ambassador" and "Statesman."

NASH (3)

The solenoid by-pass valve is located in a by-pass between the liquid line and the suction side of the compressor as shown in Fig. 7. When closed (energized), the by-pass valve lets the refrigeration system operate in normal manner. When open (de-energized), the solenoid by-pass valve lets refrigerant by-pass the evaporator, thus providing no refrigerating effect.

When the thermostat gets down to the cut-out point, it breaks the circuit to the solenoid by-pass valve, which opens and thus stops the refrigerating effect in the evaporator. When the temperature rises to the cut-in point, the thermostat energizes the by-pass valve to make it close and thus return the system to its normal cooling cycle.

A check valve is provided between the liquid receiver and the by-pass line to prevent liquid refrigerant entering the by-pass and suction lines when the solenoid by-pass valve is open. This prevents liquid refrigerant from damaging the compressor.

Cut-in and cut-out points of the thermostat are pre-set at the factory and no attempt should be made in the field to adjust the thermostat, the factory cautions.

Purpose of the thermostat and by-pass arrangement is, of course, to control the cycling of the cooling system as well as to prevent icing up of the evaporator.

Control of air flow direction is achieved by positioning of the doors on the air outlet grilles located on each side of the dash. In full open position (Fig 8), these doors will direct the air upward along the top of the car. In the low position, the doors direct air toward the lap area of the front seat passengers.

(To Be Continued)

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(not just screens)

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The McIntire Company, Livingston, N. J.

Tranter To Host Mich. RSES Truck-Trailer Refrigeration Clinic

E. LANSING, Mich. — Third clinic meeting sponsored by the Michigan State Association of the Refrigeration Service Engineers Society will be held at the Tranter Mfg. Inc. factory in Lansing on Saturday, Feb. 18, Don Renwick, association president, announced recently.

The clinic, sponsored jointly with Tranter, will study truck and trailer refrigeration systems including latest developments and service and installation procedures.

The program, scheduled to start at 10 a.m., includes a factory tour, an orientation session on engineering of systems for trucks and trailers with capacity figuring, luncheon in the factory lunchroom, and three afternoon clinics on (1) selection, use, and service problems of hold-over plates and accessories; (2) mobile self-contained systems—continuous power drives; and (3) applications of plate coils in cooling and heating processes.

Open to anyone interested, the program is free to RSES members. Non-members will be charged a $1 registration fee. Luncheon reservations should be made with Renwick at the Department of Mechanical Engineering, College of Engineering, Michigan State University, E. Lansing, Mich. by Feb. 15.

Government Contracts

SYNOPSIS OF PROPOSED PROCUREMENT

NAVY

Yards and Docks Supply Office, Port Hueneme, Calif., Attn.: Purchase Division.
REFRIGERATOR WAREHOUSE, WALK-IN, PREFABRICATED, 1,800 cu. ft. cap.—50 ea.—IFB-160-99-56B—Bid Opening 10 Feb. 56.

Officer In Charge, Navy Purchasing Office, Los Angeles, Calif.
REFRIGERATORS, ELECTRIC, Self-contained, 9 cu. ft., Fed. Spec. AA-R-211C Amend. One. Delivery to Naval Ordnance Testing Station, Chinalake, Calif.—175 ea.—IFB 123-154-56—Bid Opening 31 Jan. 56.
Following Items are under IFB-123-146/56—Bid Opening 8 Feb 56.
AIR CONDITIONING UNIT 50 tons refrigeration per hour, 5 ea.—AIR CONDITIONING UNIT, 30 tons refrigeration per hour, 1 ea.—AIR CONDITIONING UNIT, 20 tons refrigeration per hour, 1 ea. Material to be delivered to Naval Auxiliary Air Station, El Centro, Calif.

AIR FORCE

Directorate of Procurement and Production, Gadsden Air Force Depot, Gadsden Air Force Station, Gadsden, Ala.
REFRIGERATOR, CHEST TYPE, PORTABLE—75 ea.—IFB 017608-56-26B—Bid Opening 31 Jan. 56.

GENERAL SERVICES ADMINISTRATION

General Services Administration, Region 3, Business Service Center, 7th and D Sts., S.W., Washington 25, D. C.
Following Items are under IFB R2-H-70362-R—Bid Opening 1-24-56.
AIR CONDITIONING UNIT, PACKAGE TYPE, 1 ea.—CONDENSER, AIR COOLED, 1 ea.
REPAIRS TO COLD ROOMS AND WALK-IN BOXES, National Institutes of Health, Buildings Nos. 1, 3, 4 and 6, Bethesda, Md.—IFB GS-R3-B-3962—Bid Opening 2-7-56.
CONDENSER, AIR COOLED, capacity not less than 60,000 B.t.u./hr., Fan Motor 208 volts, 3 phase, 60 cycles, A.C.—9 ea.—IFB R2-H-70441-R—Bid Opening 1-30-56.

General Services Administration, Region 4, Business Service Center, 50 Seventh St., N.E., Atlanta, Ga.
AIR CONDITIONING FOR COURT ROOM AND JUDGE'S CHAMBERS, Raleigh, N. C., Post Office and Court House—Job—IFB CR4-1203—Bid Opening 1-31-56.
AIR CONDITIONING FOR COURT ROOM AND JUDGE'S CHAMBERS, Greensboro, N. C., Post Office and Court House—Job—IFB CR4-1200—Bid Opening 2-1-56.

General Services Administration, Region 6, Business Service Center, 2306 East Bannister Rd., Kansas City 14, Mo.
AIR CONDITIONING EQUIPMENT, package unit type, for use with 220 volt, 60 cycle, two phase, 4-wire current hookup, without Plenum for adaption to Ductwork. Maximum length of unit 84 in. Unit to be shipped dismantled with no section more than 36 in. in width and 65 in. in height. Offers to be considered on either of two items listed below:—5-ton capacity unit, 2 ea., 10-ton capacity unit, 1 ea.—IFB KC-42410A—Bid Opening 23 Jan. 56.

General Services Administration, Region 2, Business Service Center, 250 Hudson St., New York 13, N. Y.
ALTERATIONS INCLUDING ENTRANCE, OFFICE PARTITIONS, AIR CONDITIONING AND ELECTRICAL WORK for 201 Varick St., New York, N. Y. —Job—IFB 2PC-6-1039 (ADVT—Bid Opening 2-8-56.

CONTRACTS AWARDED THROUGH JAN. 16, 1956

General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.
Cooler, drinking water, bubbler type, complete (N155s-21148) (155-438-56)—300 ea.—$40,297—Sunroc Corp., Glen Riddle, Pa.

General Services Administration, 114 Commerce St., Business Service Center, Dallas, Texas.
Air Condition Court Room, Post Office & Court House, Tulsa, Okla. (IFB CR 7561-95)—Job—$10,990—Glyde L. Copp Co., 108 North Main St., Tulsa, Okla.
Air Conditioning Court Room, Post Office & Court House, Shreveport, La. (IFB CR7561-104)—Job—$14,000—J. W. Kunzman, P.O. Box 249, Shreveport, La.

Kelvinator Launches Service Training Program

DETROIT — A three-week training program for factory service management personnel and two three-day meetings for zone and distributor service managers was announced recently by Kelvinator as part of an over-all service program for 1956.

Factory service personnel will attend a three-week refresher course beginning Jan. 3, according to R. S. Geran, Kelvinator service manager. Distributor service managers attended the Detroit meetings Jan. 9, 10, and 11, and zone service managers attended Jan. 12, 13, and 14.

"These meetings will launch Kelvinator's 'packaged training program' for 1956," Geran said. "After the Detroit meetings, we will hold sample meetings for dealer servicemen and service agents in each distributor and zone area.

Training information will be followed by consistent field contacts from Detroit, where the number of factory trained servicemen has been increased in the service department, Geran said. Training materials to be used in the field include films covering 1956 laundry equipment, electric ranges, refrigerators, and the "Foodarama," film booklets, records, and instruction manuals.

"This series of meetings during 1956 will help Kelvinator to maintain goodwill built up over many years through new and improved appliances," Geran said.

"We feel that good service requires (1) an adequate supply of replacement parts to all points where service is rendered; (2) an organization of properly trained servicemen in our dealer organization; (3) a realistic service policy that will help to establish and maintain the confidence of our customers," Geran said.

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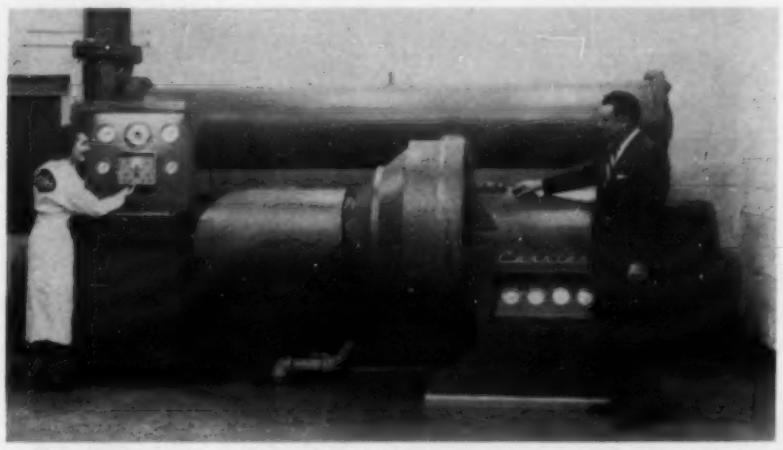

HERMETIC centrifugal compressor introduced by Carrier's Machinery & Systems Div. needs no foundation, has automatic pushbutton control, is expected to cut installation costs of large, central systems, Miss Carol Reed learns from Charles V. Fenn, division vice president.

Carrier Unveils 325-Ton Hermetic--

(Concluded from Page 1, Col. 2)

V. Fenn, vice president of the division.

Referring to existing office buildings as currently the biggest single source of business in the field of large air conditioning, Fenn said it had now become essential that owners of every major structure of this kind provide complete comfort for tenants if they are to maintain "Class A" status. He estimated the total future volume for such contracts as about $3 billion.

Air conditioning of modern industrial plants is equally "inevitable" in order to boost production efficiency in a highly competitive economy, Fenn said, and he forecast sharp increases to come in this field.

As an indication of the immense industrial potential, he pointed out that there are some 25 to 50 sq. ft. of manufacturing floor space for every square foot in present-day office structures.

"It has become a fairly well established principle that, when the percentage of air conditioned 'Class A' office space reaches 18 to 20% of the total in almost any city, then the rest of the buildings must quickly obtain air conditioning in order to compete for the better tenants," Fenn said.

"This occurred in Dallas, Houston, and other southern cities many years ago, and today the saturation in office buildings is near 100%.

"The air conditioning industry reached the 18% mark in New York City about two years ago, mainly as a result of post-World War II construction of modern new structures.

"Other cities are nearing the point of all-out air conditioning. For example, the saturation in Philadelphia today is 18%, and in Chicago 17%. We expect sharp increases in the already substantial volume of contracts in these cities in the near future."

Fenn said widespread industrial air conditioning would come inevitably as a result of the competitive need to produce better goods, faster, and at lower cost.

"Evidence of the effect of air conditioning in raising production efficiency and quality is beginning to accumulate. For example, in Huntington, W. Va., immediately after installation of a large Carrier system in the Sylvania Electric Products Co., Inc. plant there, employe turnover dropped to the lowest rate in the plant's history and absenteeism was substantially reduced.

"The Elgin National Watch Co. has testified their belief that air conditioning reduces rework by 25% and increases employe efficiency a similar amount. We are approaching the point where air conditioning of the nation's manufacturing facilities will provide the biggest volume of new business."

Fenn estimated that the overall volume of large air conditioning and refrigeration installations completed during 1956 including all markets would be about $600 million. On the basis of new product and market developments and of past growth history, he predicted that the total would increase to $850 million during 1960, and $1.3 billion in 1965.

Along with its new hermetic centrifugal, Carrier will continue to market its 17 series centrifugal machines, which can be powered by any type of drive and are available in capacities requiring up to 3,000 hp.

In the new hermetic, the compressor and electric-motor drive are united in a single casing. The machine is supplied as an integrated unit, including the pushbutton start-stop mechanism and complete electronic controls for automatic operation. It needs only to be connected to its air conditioning system and source of electrical power, Fenn explained.

The hermetic is operated from its console nerve center. Once it has been put into operation by the start-stop button, it adjusts automatically to the refrigeration load, maintaining the required chilled water temperature.

A precision assembly of prewhirl vanes regulates the flow of refrigerant gas into the two high-speed rotors of the compressor. Hydraulically operated under electronic control, the prewhirl vanes adjust cooling output.

The vanes remain closed until the motor has reached normal speed. This no-load starting feature plus a unique method of reducing current inrush on start-up, results in a lower demand charge and lower operating cost, Fenn said.

The new Carrier hermetic design also has an important effect in improving motor performance, Fenn added. Cool suction gas is continuously passed through the motor housing sweeping away heat generated there and thus insuring maximum motor life.

NARDA Hears About Conditioners--

(Concluded from Page 1, Col. 5)

by pressing a button, to have hot coffee, hot tea, or hot chocolate.

He said the new refrigerator will also give the user ice water and ice soda water, and would be the "serving center" of the kitchen.

Menzies pointed out that the gas industry had asked Servel to build "the most modern refrigerator" and advanced the company $2 million for tooling.

The three-day convention, held here last week, drew what was said to be a record-breaking turnout of some 460 dealers and over 100 wives. About 670 attended the annual banquet Monday night, it was reported.

Gabert Elected President

During the meeting, Don Gabbert, Minneapolis, was elected president of NARDA, succeeding H. B. Price, Jr., Norfolk, Va. Joseph Fleischaker, Louisville, Ky., and Tom Carmichael, Seattle, Wash., were elected vice presidents, and Emerson Dole, Wichita, Kan., was re-elected as a vice president.

Tracey declared that room air conditioner manufacturers have overproduced "two years hand running." This, he said, resulted in price cutting and loss of profits. He stated that all manufacturers are conscious of these problems and are anxious to correct them.

Pointing out that there are 150,000 carry-over models now in inventory, Tracey said there will be some price-cut advertising on these units but this should be almost entirely cleaned up after the first 2½ months of the year. He forecast a far firmer price structure this year on 1956 models.

As price-cutting declines, dealers will find it profitable to sell "quality at higher prices," according to Tracey.

Tracey said "the business is there" when hot weather arrives, whenever it occurs. In 1955, he noted, the primary selling season was during July and August, with more units being sold in July than in May and June put together. He claimed the industry lost $15 million to $18 million because it became impatient and didn't maintain prices through the summer.

Suggests Dealers Enter Packaged Cooling Field

Pointing out that some dealers already are getting into the packaged air conditioning field, he urged the retailers to give real consideration to this business because of the profit opportunities it offers. He said that one of the advantages of this field is, at the moment, complete freedom from problem of price cutting.

Craig said the attributes of the automobile-type dealer are:

He should carry preferably one full line, have the physical plant to display the full line of products the manufacturer makes, merchandise and promote to develop prospects, have the ability to convert trade-ins into profit, be alert to the growing potentialities of built-ins and package kitchens, train his personnel to demonstrate and sell, and utilize time payment as a sales tool.

Outlining what Westinghouse's policies will be in the consumer products field, Craig said, in part: "We'll carefully examine our dealer structure—seeking out the automobile-type dealer . . . who will take advantage of our franchise, and our national advertising to cash in on it. . . .

"In return for the automobile-type dealer, we're prepared to shift more and more of our promotional monies to the local level."

2 Resolutions Passed

At their business meeting, NARDA members indicated that they want manufacturers to stop furnishing service at the retail level. They also want factories to "recognize the increased operating costs and lower average unit sales in establishing the dealer's differential."

Their views were expressed in two "sugar-coated" resolutions which asked NARDA's officers and directors to:

1. "Actively work with the manufacturers of the products we sell in the education and building up of competent and efficient service and repair departments in the plant and store of every retail dealer so as to relieve the manufacturer of furnishing service at the retail level."

2. "Request a cooperative promotional effort at the factory level among all factories of the products we sell to educate and influence the public toward the purchase of TV and appliances and to insist that these factories recognize the increased operating costs and lower average unit sale in establishing the dealer's differential."

It was suggested from the floor that a resolution asking manufacturers to discontinue national advertising of list prices should be considered. However, a formal resolution to this effect did not come before the membership for a vote. One dealer claimed advertising of list prices nationally "is responsible for much of the price-cutting we complain about so bitterly."

In the president's address, Price said the most important thing the dealer must do today to preserve his position in the industry is to improve his managerial concepts.

"The dealer simply cannot rely on others to make the decisions on which his business future rests," Price declared. "He must decide and must be in a position to decide what his selling prices for merchandise and his markups should be in order to provide a reasonable operating profit for the firm to live and grow on. He must have both the capacity and the opportunity to determine his own destiny as a merchant."

Price also said dealers must "find within ourselves the strength to refuse to handle merchandise . . . on which there is no profit—but first exhaust every effort to find a way to handle it profitably.

"Never permit anyone to push you around," he advised. "This is your business. Without you all others in the chain of distribution die. You've earned the right to a profit."

New Directors Elected

Elected new directors of NARDA were George Johnston, Minneapolis, and Harold Witham, Bakersfield, Calif. Re-elected directors were Gabbert; Carmichael; Mort Farr, Upper Darby, Pa.; Wallace Johnston, Memphis; and J. R. Westwood, Billings, Mont.

At the banquet, Harry Strohman, Justis Bros., Inc., Newport, Del., was named as winner of the "creative retail salesman of the year" award for the appliance and TV industry. The contest is sponsored jointly by NARDA and the *Ladies Home Journal*.

Georges Birgy of the magazine presented Strohman with a check for $500 and a silver plaque.

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Despite this rapidly changing market situation—*each one of these top contractors reads the NEWS!*

As you plan tomorrow's sales, it's hard to identify the faces of the most important contractors. But, when you advertise in the NEWS, you can be sure that top dealers and contractors will be familiar with your products, your policies, your sales and promotion programs.

For the contractor who is considering air conditioning installations for the first time, the NEWS is a must. It is the only place he can turn for the kind of information—the kind of editorial content that can teach him the vital facts that will help him make dollars in this fast-growing industry.

The NEWS is vital, too, to the contractor who has only recently added residential air conditioning systems to his line. He must know the latest trends, the latest products and installation hints that can help him become an important factor in the sale of residential air conditioning systems.

And, for the aggressive leader—the contractor who is today No. 1 in his marketing area, weekly reference to the NEWS is a Monday morning routine. He cannot do without it!

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450 West Fort Street, Detroit 26, Michigan

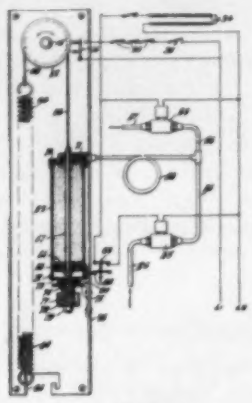
NEW YORK, 521 Fifth Ave., Murray Hill 7-7158, Robert M. Price.
CHICAGO, 134 S. LaSalle St., Franklin 2-8093, Allen Schildhammer.
DETROIT, 450 West Fort St., WOodward 2-0924, Joe Sullivan.

For more information about products advertised on this page use Information Center, page 26.

PATENTS

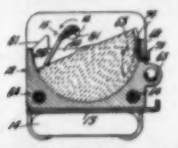
Week of Sept. 13 (Concluded)

2,717,502. ICE MAKER. Ralph D. Barton, Evansville, Ind., assignor to Servel, Inc., New York, N. Y.



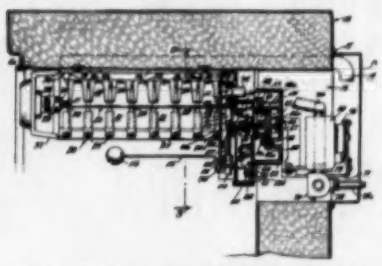
1. In an automatic ice maker, an ice mold, means for filling the mold with water to be frozen, means for freezing the water in the mold, means for freeing the ice from the mold, ejector mechanism including power means for ejecting the ice from the mold, and control mechanism for said filling, freeing and ejecting means, said control mechanism including means operable responsive to the freezing of water in the mold for energizing the power means, and means operable responsive to movement of the ejector mechanism into contact with ice frozen to the mold for deenergizing said power means pending the freeing of the ice from the mold.

2,717,503. ICE MAKER. Harold Woehler, Evansville, Ind., assignor to Servel, Inc., New York, N. Y.



1. An ice mold having an ice forming compartment therein, means for forming an ice piece in said compartment, means for moving said ice piece relative to said compartment, and an ice-cutting knife-edge associated with said compartment in a manner as to cut into a surface of the ice piece as the piece is moved relative to the compartment to thereby retard relative movement between said compartment and said ice piece.

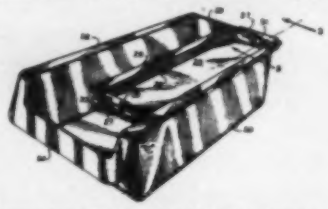
2,717,504. ICE MAKER. Carl J. Knerr, Evansville, Ind., assignor to Servel, Inc., New York, N. Y.



1. A refrigerator having a freezing compartment bound by a refrigerated liner, an ice storage receptacle within said freezing compartment, and a self-contained automatic ice maker mounted on a side wall of said liner, said ice maker including an ice mold removably attached in intimate thermal contact to said side wall to be refrigerated thereby, means for filling the mold with water to be frozen, ejector mechanism mounted on the ice maker and including a member movable into contact with ice in the mold for removing ice from the mold and discharging such ice into the storage receptacle, and control mechanism for said mold filling means and said ice ejecting mechanism, said mold, said filling means, said ejector mechanism and said control mechanism being united into a single unit so constructed and arranged as to be readily insertable and removable as a unit into and out of the refrigerator independently of the refrigerated liner.

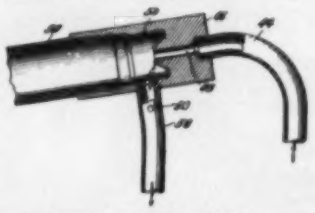
2,717,505. ICE RECEPTACLE AND DRIP TRAY. Sven W. E. Andersson, Buffalo, N. Y., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 10, 1952, Serial No. 325,148. 1 Claim. (Cl. 62—105.)

In a household refrigerator having an ice-maker and electrical defrosting means for releasing pieces of ice therefrom and thereby producing drops of water, a storage receptacle for the ice, a drip pan for detachable engagement with the storage receptacle being substantially rectangular in horizontal section having at least one side and rear wall thereof terminating at the top in horizontal surfaces in a common horizontal plane and having a substantially horizontal pin in a rear upper corner thereof, said drip pan having an opening in each end wall at diagonally opposite corners thereof for the receipt of said pin, and said drip pan



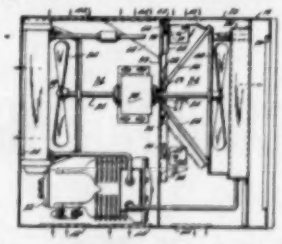
comprising a comparatively narrow receptacle which is shallow and elongated construction of a configuration substantially corresponding to that of the storage receptacle in which it is mounted and having horizontal flanges at its sides and ends so that it may be applied longitudinally in the receptacle with a flange at one side and end of the pan resting on the horizontal surfaces of said one side and end wall of the receptacle and with one of said openings received by said pin for supporting the pan on the receptacle without regard relative to the location of the ends of the pan.

2,717,506. ICE MAKER. Sven W. E. Andersson, Buffalo, N. Y., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware.



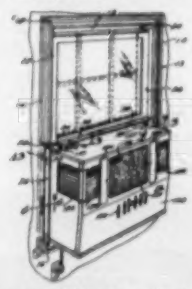
1. A liquid conduit having an inlet portion with a valve therein connected to a source of liquid and an outlet portion located in a sub-freezing atmosphere, and means in said conduit for keeping the outlet portion thereof substantially free of ice, said means including a diverter having a restricted passageway connected to the inlet portion of the conduit and an unrestricted passageway connected to the outlet portion of the conduit and arranged for series flow through two passageways, and a drain always in open communication with the unrestricted passageway and leading from the lowermost portion thereof, the construction and arrangement being such that when the valve is open a stream of liquid flowing into the restricted passageway flows therefrom substantially as a solid stream through the unrestricted passageway into the outlet portion of the conduit, where when the valve is closed drops of liquid flowing into the restricted passageway flow therefrom through the unrestricted passageway to the drain without entering the outlet portion of the conduit.

2,717,507. WINDOW MOUNTED AIR CONDITIONING UNIT. Robert E. C. Hartman, Dayton, and Richard W. Gilmer, Lewisburg, Ohio, assignors to Chrysler Corp., Highland Park, Mich., a corporation of Delaware.



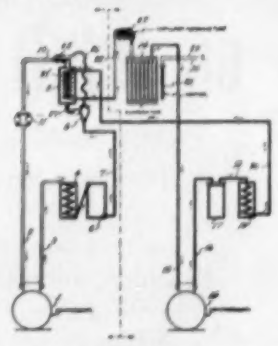
1. An air conditioning unit comprising a substantially rectangular casing adapted to be positioned in a window of a room to be conditioned, said casing having top, bottom, front, rear and first and second side walls, partition means extending transversely of said casing and intersecting said first and second side walls, said partition dividing said casing into a front evaporator compartment and a rear condenser compartment, said evaporator compartment having an inlet opening for the admission of recirculated room air in each of said first and second side walls adjacent said partition and said condenser compartment having inlet opening in said side walls for the admission of fresh outside air, said evaporator compartment being provided with an outlet opening in said front wall for discharge of air to the room and said condenser compartment being provided with an outlet opening in said rear wall for discharge of air to the outside, said first side wall being provided with a fresh air inlet opening on the condenser side of said partition, said partition having an opening adjacent said first side wall, means including a duct defining a passage isolated from the air in said condenser compartment and extending between said fresh air inlet opening and the opening in said partition for the admission of fresh outside air to the evaporator compartment, a damper pivotally mounted on said casing adjacent the intersection of said partition and said first wall for movement between a first position in which it blocks said fresh outside air passage and a second position in which it opens said passage and blocks the recirculated air inlet opening in said first side wall, said partition having a second opening therein, a second damper mounted on said casing for movement between a first position in which it blocks said second opening and a second position in which said second opening is open and said second damper baffles room air from the recirculated air inlet opening in said second side wall of the casing to said second opening in said partition for room pump out, an air propelling device in said evaporator compartment operable to induce a flow of air from said evaporator compartment through said evaporator compartment outlet opening in said casing front wall, and an air propelling device in said condenser compartment operable to induce a flow of air from said condenser compartment through said condenser compartment outlet opening in said casing rear wall.

2,717,508. WINDOW MOUNTED AIR CONDITIONER. Joseph D. Loveley, North Dayton, Richard L. Brugler, Trotwood, and Walter G. Miller, Dayton, Ohio, assignors to Chrysler Corp., Highland Park, Mich.



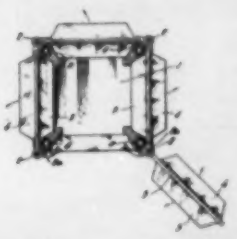
1. An air conditioning device for application to a double hung sash type window mounted in the exterior wall of a room having a window frame including vertical stop members, horizontal sill member extending between said stop members and upper and lower sashes mounted for vertical sliding movement in said window frame, said stop members and said sill extending inwardly from said window sashes, said air conditioning device comprising a hollow rectangular metal frame and a room cooling unit, said metal frame having a bottom portion adapted to be secured to said sill, side portions adapted to be secured to said stop members and an upper portion spanning the space between said side portions, said metal frame being adapted for mounting inwardly of said sashes so that vertical movement of the sashes is not impaired by the metal frame, said cooling unit comprising a casing shaped for mounting in said metal frame to extend to its entirety inwardly from said sashes, an evaporator within said casing to cool a body of air from said room and return such air to said room and compressor and condenser means mounted within said casing and operatively connected to said evaporator, and a hinge having a vertical axis and mounted on said metal frame and said casing to accommodate pivotal movement of said room cooling unit in a horizontal plane into said room.

2,717,765. VISCOSIMETER BATH REFRIGERATION UNIT. Paul Lawler, Jr., Bayonne, N. J.



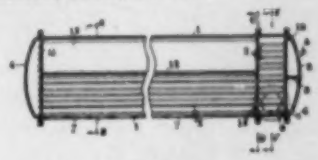
1. A viscosimeter bath cooling unit comprising in combination, a primary refrigeration system employing a liquefiable normally gaseous refrigerant, a compressor for compressing same, a refrigerant liquefying condenser, an evaporation vessel in which the refrigerant is evaporated, a thermostatically controlled expansion valve from which the refrigerant is expanded into said vessel for cooling said vessel and for recycle to the compressor, and which is controlled by thermostatic means at said vessel, a refrigerant throttling valve on the intake side of said compressor, and a secondary system also comprising a compressor for compressing a secondary refrigerant, and including a refrigerant liquefying condenser, and a coil disposed within said vessel of the primary system and in which said liquid secondary refrigerant may be cooled by indirect heat transfer with the vaporized primary refrigerant, a capillary metering tube through which the thus cooled liquid secondary refrigerant is passed and vaporized, a viscosimeter bath and an evaporator to be inserted in said viscosimeter bath and into which said vaporized secondary refrigerant is discharged for cooling said bath prior to compression by and for recycle to said secondary compressor.

2,717,766. HEATING AND COOLING CHAMBER. Marcelis Becker, Hilversum, Netherlands. Application May 21.



1. In a heat exchanger, means defining a chamber, said chamber having fixed corners defining side openings into the chamber therebetween and a plurality of walls for closing said side openings, at least one of said walls being movable and comprising a heating means on one side and a cooling means on the other side, said heating means being insulated from said cooling means, pivot means, said movable wall being connected to said pivot means and thereby being mounted for movement to position selectively the side containing the heating means and the side containing the cooling means to face the interior of said chamber.

2,717,767. HEAT EXCHANGER. Georges Servan Cantacuzene and Carmen Marguerite Cantacuzene, born Skeletti, Paris, France.



1. A heat exchanger comprising a horizontal closed cylinder, a bundle of longitudinal tubes mounted in said cylinder for circulating a first fluid in said cylinder, an inlet and an outlet for said first fluid in said tube bundle, orifices spaced along the cylinder at the lower portion thereof to enable a second fluid to enter said heat exchanger, a longitudinal partition having a substantially horizontal upper edge and forming in said cylinder a space into which second fluid admitted through said orifices can enter only by flowing over the upper edge of said longitudinal partition, said upper edge being positioned at a level higher than at least the major part of said longitudinal tubes, and means for discharging said second fluid from the bottom of said space.

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POSITIONS AVAILABLE

EXPANDING SOUTHERN Carrier distributor seeking experienced air conditioning sales engineer for dealer contact program. Car and expenses furnished. Salary and bonus commensurate with ability. Write AIR CONDITIONING DEPARTMENT, Box 1767, Shreveport, Louisiana.

PROJECT ENGINEER — Capable of handling product from original design into production. Minimum 5 years' experience air conditioning or refrigeration products. Sheet metal product design and manufacturing experience desirable. Cost consciousness, manufacturing know-how and ability to cooperate with and assist other departments is essential. College graduate preferred. Salary commensurate with education and experience. REMINGTON CORPORATION, Auburn, New York, Attn: A. E. Reiss, Director of Engineering.

MANUFACTURERS' REPRESENTATIVE with commercial refrigeration experience, now covering Michigan, Indiana, Midwestern or Southwestern states, to sell fast-growing line of commercial equipment. Write PAUL R. STEWART, 1712 John Street, Cincinnati 14, Ohio.

ENGINEERING GRADUATE with a background of refrigeration experience, capable of handling a project from development into production. Opportunity for man of proven ability to grow with expanding Midwest manufacturer of refrigeration and accessory equipment. Preferred age, 30-35 with a minimum of five years' experience in refrigeration equipment design. Our employees know of this ad. Write BOX A5417, Air Conditioning & Refrigeration News.

DISTRIBUTORS AND manufacturer's representatives wanted to carry Rovan All-Electric truck refrigeration units for dairy, meat and other local and regional delivery trucks. Several valuable territories open for Rovan All-Electric refrigeration units and Certified-Air dairy and beverage cases and air conditioners. Write BOX A5423, Air Conditioning & Refrigeration News.

FIELD ENGINEER—a technical graduate or equivalent, 25 to 32 years of age with experience in refrigeration and air conditioning, required to call on contractors, wholesalers, and manufacturers in Pittsburgh-Cleveland area. After a factory training program, very interesting work awaits you. Remuneration based on liberal salary, bonus and expenses. Write BOX A5424, Air Conditioning & Refrigeration News.

WANTED—TWO district managers: One to be located in Metropolitan New York area and one in San Francisco. To supervise sales offices of prominent manufacturer of heating, cooling, and air conditioning equipment on East and West Coast areas. Send complete resume of education, experience, and salary requirements to BOX A5426, Air Conditioning & Refrigeration News.

AIR CONDITIONING sales engineer in Maracaibo, Venezuela with established U. S. firm well known in the air conditioning industry, handling packaged and large central plant equipment. Knowledge of Spanish desirable. Excellent remuneration for qualified engineer. Furnish picture, personal data, references, and details of engineering background. BOX A5430, Air Conditioning & Refrigeration News.

INSTRUCTOR: WE are a national manufacturing firm expanding our heating and air conditioning operations. We are looking for a top caliber man who has a proven background of experience in the heating and air conditioning field who can develop his own training program. Because this is a new job with us, the individual must be thoroughly experienced in servicing field equipment and training dealer personnel. First location will probably be in the southwest but individual must be free to travel or move as required. Compensation open with outstanding employee benefits. Our personnel know of this opening and all replies will be confidential. Send detailed resume, including salary requirements, to BOX A5432, Air Conditioning & Refrigeration News.

CHIEF ENGINEER for air conditioning distributor and contractor on Florida's West Coast. Complete charge of department including estimating, design and supervision of installation. Position offers weekly base pay with incentive and liberal vacation plan. Our employees know of this ad. Write BOX A5435, Air Conditioning & Refrigeration News.

EXPERIENCED AIR conditioning sales engineers for distributor of top line equipment of Florida's West Coast. Draw and liberal commission plan offered. Please write giving details of past employment and enclose photograph. All replies confidential. Our employees know of this ad. Write BOX A5436, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

AUTOMOTIVE AIR conditioning blower assembly: Welded pressed steel housing, rubber mounted for smooth quiet operation. 4" air inlet 3" air discharge. 6 volt d.c. motor 1600 r.p.m. 150 c.f.m. 9" H x 8" W x 3½" D. $6.95 ea. Lots of ten $6.50. Send for free circulars on refrigeration values. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

AVAILABLE FOR immediate delivery substantial quantity 1950 well-known brand hermetically sealed condensing units ¼ hp., 115 volts, 50/60 cycles, complete with freezer type evaporator —$22.00 each. BOX A5422, Air Conditioning & Refrigeration News.

Frozen Food--

(Concluded from Page 1, Col. 2)

Association of Frozen Food Packers and the National Frozen Food Distributors Association.

Hamilton Stone, national sales manager of Minute Maid Corp., will take up the cabinet space problem. He is chairman of a special committee to study this.

Stone will outline steps taken toward development of improved cabinet designs and will present results of a survey of retail methods of frozen foods handling. He is also expected to stress more efficient methods which will permit retailers to handle more frozen foods in present-style cases.

Frozen Foods Handling Methods

Among other topics scheduled for discussion are exposure of frozen foods to the atom bomb, problems of transporting frozen foods by motor carrier, and an appraisal of the status of frozen food marketing.

In addition, there will be a panel discussion on radiation sterilization, another on general frozen food transportation, and an interim report on the prepared frozen food industry by Dr. Wayne Bitting of the Department of Agriculture.

Nutrition Study Report

Conferees will also hear reports on results of a frozen food nutrition study.

A paper evaluating the findings will be presented by Dr. L. J. Tepley, director of projects, Wisconsin Alumni Research Foundation. The foundation evaluated 27,562 packages of 51 different frozen foods.

Analysis of the findings will be given by Dr. Frederick J. Stare, Harvard university; Dr. Hazel K. Stiebeling, Human Nutrition Research Branch, Department of Agriculture; and Dr. Neige E. Todhunter, University of Alabama. Harold J. Humphrey, research manager, Birds Eye Div., General Foods Corp., will be session moderator.

Edwin T. Gibson, first president of the NAFFP, and Dr. Carl H. Krieger, director of basic research, Campbell Soup Co., will tell why results of the study are important in frozen food merchandising.

The two association presidents, Sam Vogel, president, Vogel's, Inc., Little Rock, Ark., and George L. Mentley, marketing manager, Birds Eye, presidents of the NFFDA and the NAFFP, respectively, will deliver convention addresses.

Humidity Senser--

(Concluded from Page 1, Col. 4)

tioning equipment and for measuring dryness of loads in automatic clothes dryers.

The element is described as a plastic wafer resembling a small stick of chewing gum. It uses a conducting plastic whose resistance changes according to the amount of moisture to which it is exposed. A small metallic gridwork etched on the plastic secures the electrical connection.

El-Tronics claims that the new element will accurately measure relative humidity under almost any conditions and temperatures.

A. O. Smith Air Conditioner Line--

(Concluded from Page 1, Col. 2)

a new vertical arrangement.

This will slightly widen but greatly lower the YAC, as the unit is labeled. It was formerly 70 in. high.

This line, which combines heating and cooling systems in one cabinet, is available in 2, 3, and 5-ton sizes on cooling and with either oil or gas heat.

The company's line of horizontal and remote air conditioners are changed only slightly this year, with most of the alteration confined to restyling.

In all, Permaglas has this year a total of 12 models of year-round air conditioners and a total of 26 models of straight air conditioning units. The latter will be both air and water cooled and will be of vertical, horizontal, and remote types, involving capacities of 2, 3, 5 tons.

The new vertical cooling units are adaptable to existing heating equipment, both that bearing the Permaglas brand and others, C. L. Hewitt, Jr., manager of heating and air conditioning products for Permaglas, declared.

So adaptable are these VAC units, Hewitt said, that if the customer's blower is adequate to meet the need, he will be saved the expense of buying one with his cooling unit.

Sizing sheets to guide the installer and conversion kits which will enable the original purchaser of a heating unit to add on his cooling unit are provided by the company with these new units, he added.

Hewitt noted that the remote air-cooled line has been expanded to 18 models by the adoption of three basic evaporator arrangements.

By the end of 1956, Hewitt said, A. O. Smith will have expanded its new heating and air conditioning lines to include 82 models. In addition to the cooling and year-round units mentioned above, the company also introduced this month 22 units of gas-fired furnaces in the "Lo-Boy," "Hi-Boy," and "Downflow" models ranging from 70,000 to 150,000 B.t.u. input.

With variations in model for either belt or direct drive through the 100,000 B.t.u.h. range of capacity, this brings to 54 the first grouping of new models to reach the market.

Six additional gas-fired models ranging from 175,000 to 200,000 B.t.u.h. will be available in June.

Oil-fired furnaces comparable in number to the gas fired, will go into production in April through 150,000 B.t.u.h. The final six larger units will become available in July.

Hewitt revealed that between now and 1957, the heating products department will also bring from the planning boards a top-of-the-line 400,000 B.t.u.h. input model.

Approximately $1 million of a multi-million dollar expansion of the Kankakee Works scheduled for the next two years has been allocated to the heating and air conditioning products section, Hewitt said. It will involve the addition of nearly 200,000 sq. ft. of manufacturing space for furnaces and air conditioning equipment alone.

With this capital investment, the application of new manufacturing techniques, and the development of a full furnace line with ceramic coated heat exchangers, A. O. Smith intends to be fully competitive in the home heating industry.

A. O. Smith earlier announced that it intends to build new heating and air conditioning product plants on the east and west coasts.

Architect
Louis C. Hinckley

General Contractor
E. J. Pinney Co.

Air Conditioning Contractor
Simons Burner & Petroleum Co.

240 POINTS of CONTROL

ON BUSH AIR CONDITIONING INSTALLATION

That's how the contractor describes the BUSH air conditioning system at the new Medical Center, Springfield, Mass.

Entire building is conditioned with BUSH units. 'CR' Remote Air Conditioning Units . . . 240 of them . . . provide year 'round comfort: heating in winter, cooling in summer and between-season circulation of filtered air. Units are individually adjustable to suit room occupant's preference or a particular area's requirements. Shallow depth enhances room appearance, saves valuable floor space.

Interior zone conditioning of waiting rooms, corridors, etc. is accomplished by 4 Bush Air Handling Units . . . 2 of the vertical floor-mounted type and 2 horizontal ceiling-hung models. These versatile units are available in a wide range of capacities and with extra-efficiency Inner-Fin coils — exclusive with BUSH.

BUSH

Write for descriptive literature on these and other Bush Air Conditioning and Refrigeration units . . . most complete line in the industry.

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